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# SPANISH GARDENS—OLD AND NEW

BY FRANCIS HOWARD, Garden Architect

Illustrated by photographs by the Author

*THE reason Francis Howard is so well qualified to speak of Spain and its gardens is that in a land of traditions and among those whose traditions are sacred, he has entered the precincts, generally shut to the outside world, through the road of respect for the past and love for the present of all that makes Spain great in history, literature and art. Thus he became welcome in those private gardens of the Spanish Grandees and made the unusual photographic studies, a few of which are shown in this article. Mr. Howard's love for the past is not a mere prejudice but is the basic principle on which is founded his success as a designer of beautiful gardens.*

*The following is from an address recently delivered by Mr. Howard before the American Institute of Architects on the subject of Spanish Gardens, and we think it particularly apt just now on account of the wide-spread interest in this subject and the practical applicability of this character of garden design to the surroundings of our city homes, where ugliness has installed itself, especially during the rapid city growth of the past fifty years.*

THE EDITORS.

TUCKED away behind the walls of sleepy old Cordoba, and within walking distance of that most noble monument of the Tenth Century, the Mosque of the Moors with its eight hundred marble columns, is a private garden surrounding the Villa of a Spanish Grandee, the Marquis de Vianna. Stepping out from the beautiful patio that occupies the center of the building, one enters the charming court to the right. For here is dancing sunlight and moving shadows on old gray walls over which grape vines twine. The walk by the wall is of two sizes of light red tile, laid in a geometric pattern and leads to a pretty wooden gate of spindles painted blue. At the left of this is a path of gray gravel, a setting for a few orange trees growing in rectangular beds bordered by clipped boxwood hedges. If you wish to see some real examples of boxwood hedges you may look into the next court, paved with bricks, and enjoy four immense types of this evergreen clipped in spherical shape, ten feet in diameter and three hundred years old; their small leaves shimmering against the white stucco of the

View in a Private Garden at Seville, Spain, showing ancient Roman column of granite surmounted by marble statue of great antiquity, with flower beds laid out around it, a small water channel of tile in the pavement, and interesting wall treatment

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Villa, from the wall of which opens a casement window onto a truly Spanish balcony. It is astonishing that this little court is not overcrowded by these immense plants. The graceful arches of trimmed cypress, which connect these ancient boxwood hedges make one of those rarely beautiful settings which only time and skill can create. Underneath this extraordinary arbor is a simple old fountain containing a quaint, stone figure and surrounded by potted plants. Down the path that leads away from this arbor, the eye is carried and sees, in pleasing perspective, the simple wall of the Villa ending in the graceful old tower of a nearby church.

**Private Garden of the Marquis de Vianna, Cordoba, Spain**

**Note the wall pierced with arches, dividing the flower garden from the vegetable garden**

What an unusual way it is to raise vegetables and fruit in beds radiating from a center and surrounded by clipped hedges, and what a sense of architectural fitness there is in the wall with its wide arches and tiled coping, which separates this part of the garden from the next division. The Villa is always seen as a part of the picture and its walls and roof make the whole thing domestic and intimate. Like every garden in Spain, simple iron grilles and gates are used under the arches, allowing the sunshine and air to pass freely through them, but forming a sufficient barrier in case of need. This garden is one of the best illustrations of the family life and thoughtfulness of the Spanish people. Their dignity of manner is not an affectation, and their gardens, although dignified, are not affected but are a logical growth from year to year and from century to century of a civilization which has its roots in Rome, and which has survived all the shocks of the Moor and the Goth during a period of over two thousand years.

### A Neglected Garden—Cordoba

JUST outside the city, along the banks of the Guadilaquivar, lies a garden over which the hand of time has passed, leaving behind it moss and decay but leaving also an atmosphere of peaceful repose that is very beautiful. Walking through the high gate and down the broad steps we enter an almost forgotten world and find ourselves actually wandering along the paths where walked many a famous cavalier of the Fifteenth Century, including Christopher Columbus who, for four years often talked and pleaded here with Queen Isabella, trying his best to persuade her to aid him in his wild project of crossing the untried seas toward the unknown West. The sturdy walls,

View in the Private Garden of the Marquis de Vianna, Cordoba, Spain, Showing an old Fountain under Cedar Arches Forming a Circle around the Center of a paved Court with fine Boxwoods at Corners



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steps and water basins of this garden stand as they did in that day, a little more worn and ragged, but still graciously welcoming the lover of beauty who seeks it in secluded nooks like this, under the walls of the old Alcazar of Cordoba.

The dominant walls of the great Moorish tower pile up at one corner of the garden and are reflected in the still waters of the pool. Old vines and their white flowers drape themselves over the iron railing of the stairway, and on the well-proportioned and stuccoed posts are terra cotta pots of graceful outline containing small boxwood plants. A greenhouse is on the upper terrace, over which hang the moving branches of eucalyptus trees.

The illustration of the large stone fountain, (about ten feet in diameter), gives a good idea of the type of garden ornament so appropriate to the quiet effect of this spot. This fountain is octagonal in form and has a high basin, about three feet, for its lower part with a plain upper bowl from which the water constantly drips to fill the water jugs of the neighbors, when they gather every morning and evening throughout the year. It was raining gently when these pictures were taken but my assistant assured me they would come out better than if it were too sunny, and he, being a native of Cordoba ought to know, so I left it to him.

What fine arches of bent saplings the Spanish gardeners make each year, and how delicately the leaves of the climbing rose are outlined against the sky. One feels the invitation to walk under the fragrant arch, up the easy steps, and on to the water basins. There are three terraces in this garden. It is not flat like others in Cordoba, so the water is stored as we have seen in the basins on the upper terrace and distributed from there all through the lower ones where grow the usual vegetables and the inevitable orange trees with ornamental but bitter fruit.

View in Garden of the Provincial Museum at Cordoba, Spain, Showing Fountain and antique Statue of Bacchus in the Foreground

GARDEN OF THE PROVINCIAL MUSEUM—CORDOBA

IF one wants to enjoy a combination of historic architecture, with touches of archæology, and an appropriate garden setting, go into the small court of the Provincial Museum in Cordoba just off the "Plaza del Petro" near where Sancho Panza is said to have bought his horse, and look at the arrangement and proportion of the enclosure. Arches of Moorish type of brick of varied texture fill one side of the court yard, while most of the other wall surfaces are stuccoed. The space is rectangular in plan but the four sides of it vary in the height of their walls and are enriched by inlays of blue and yellow tiled panels, wrought iron grilles in front of windows, and a loggia above. This court is a gem as an example of city

View in the Garden of the Marquis de la Vega, Toledo, Spain



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Patio and Marble Fountain with Star-shaped Water Basin in the Garden of Senor de Cepero, Seville, Spain

Garden of the Marquis de Toledo, Toledo, Spain
A true Spanish garden, correct in color, form and the setting of its architecture



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garden planning because it is limited in every way and does not depend on rapidly fading flowers for its permanent scheme of color. The central fountain is of the true, simplest form of Spanish stone font and is graceful though so sturdy and severe. There is a tile border around its octagonal lower basin and four paths radiate from it to the corners of the place. In the spaces thus formed are planted evergreen hedges about two feet high and within these little enclosures are put ornamental trees that can be renewed from time to time. The beautiful statue of Bacchus shown near the fountain is of Greek marble of the First or Second Century, and was dug up beneath this very pavement.

### Garden of Senor de Cepero—Seville

THERE are many lovely gardens in carefree Seville and one of the most charming private ones is that of Senor de Cepero the patio of whose house is shown in the illustrations. Its simplicity appeals to one wearied by the false aspirations of Madrid and Barcelona towards architectural heights. Here is the Moorish arch on well proportioned Renaissance marble columns while a vigorously designed marble fountain adorns the center, and is sunk into the eight pointed star-shaped basin in the middle of the paved court. An edging of blue, yellow, and white tile follows around the border of the basin while plants and boxwood trees in terra cotta pots rest the eye in this quiet place. At times a blue sail cloth is drawn across from the upper stories making an ideal retreat.

### A Private Garden of Seville

THIS is an ideal combination of architecture and gardening as limited by the uncompromising walls and spaces of a city home. At the right there is a water tank, built of cement and bordered with colored tile, from which the plants are refreshed. Most of the ground space is covered with colored gravel but in the portions left over, low evergreens are planted around flower beds to frame them in and keep them from straggling. Water is led through narrow tiled canals from the tank to various parts of the garden, which after all is only a courtyard; vines climb on the walls, and arched trellises divide this from the next "room" of the garden, and a low ledge, inlaid with tile, all in color, forms a sort of bench or seat. The column with its Roman fragment mounted on it, is a beautiful note connecting the present with the past as well as giving a needed accent at this point. Then the pierced terra cotta balustrade along the top of the dividing wall beyond has great value structurally, decoratively, and historically, with its refined Gothic detail. The roof tile again that cover the adjacent buildings make a pleasing frame for the picture against the sky and cause one to be thankful that in this little garden, as in so many others, the Spaniards have omitted nothing which would delight the eye, yet there is no crowding, but always the noble and simple sense of proportion with its respect for great traditions.

### Garden of the Marquis de la Vega—Toledo

LOOKING out, through the door, across the porch that stands between the old fashioned kitchen and the garden of this picturesque house of the Sixteenth Century, I could but exclaim to my companion, "this might well be the setting of a house at home!" I meant that the garden setting as shown appealed to me as being quite practical for application to our own homes in America. Here, for example, are brick walls covered by climbing ivy, with flowering plants in pots sitting nonchalantly on the edge of a brick cistern from which the water is taken to wet down the garden. To be sure the columns of the veranda are stone, but we will come to that, and the beautiful grille over the window is wrought iron, which we also can make. The only thing we don't seem to understand yet is the simplicity of contour and the broad wall spaces, giving a chance for the shadows to make patterns on the bricks.

The intimate interior of the patio of another house in Toledo shows a treatment truly Spanish but more luxurious than the other. This is a garden secluded from the world and only open to the sky. The ground is paved with tiled walks of light red with yellow and blue inserts of glazed pieces, the flower beds are raised about three inches above the walks, and the plan centers around the octagonal low tiled basin of the star-shaped fountain of marble. How simple are all the fundamental contours here, but how varied are the suggestions of historic ornament which occur, for example, in the Gothic fragment of balustrade, the Moorish lattice on the upper balcony, the balcony itself with its renaissance balusters of wood surmounting graceful curved roof tile. Then the stone columns, above and below their Gothic feeling, and, on the wall the Arms of the family built in so they will outlive the varying revolutions and eccentricities of man. Over all this climb roses in Spring, and lilies grow in the water of the pool. In all our vast California and our many Southern cities and towns I do not recall a single courtyard that yields to us the poetic beauty of this modest home in the time worn and high walled city of Toledo.

# ARCHITECTURAL EDUCATION

## PART III—TRAVEL AND STUDY ABROAD

BY C. H. BLACKALL, F. A. I. A.

PRESIDENT ELIOT once characterized foreign travel and study as "that foolish beginning and most excellent sequel to education." It was not so very long ago that there seemed to be a feeling that a young man could not go to Europe too soon, and that if he could but get into the Ecole des Beaux Arts early in his architectural training, his future was assured, but that was in the days when our own schools were in their beginnings and the time has long gone by when the Ecole des Beaux Arts is a necessary factor in our educational system. There is now a very general reluctance on the part of our architects and our educators to advise a term of study in the Ecole des Beaux Arts. The conviction has crystallized that foreign travel and study should properly be the final factor in education, post-graduate in its nature, the last step before the take-off into the abyss of architectural practice. It sounds reasonable to say that we should send our young men abroad early in life, even before they are twenty-five, and that in that plastic age they will imbibe the spirit of Europe and its art treasures, but the truth of such statement is by no means accepted. It, to be sure, depends a great deal upon the man himself rather than his age, but except in a few rare cases of undoubted talent, a man will profit most by acquiring his culture after his foundation has been laid in schooling and practice. Culture in this sense is not innate or acquired in the school, but is built up on long, thoughtful experience and observation, and culture in the finishing sense is what Europe, with its past, can give us if we are ready to take it.

There are two attitudes which conduce a great deal to success in foreign study. Boston has been defined as a state of mind, architecture as a mood made permanent; and it is a state of mind and a fixed mood, or attitude towards life and its problems that is really necessary before one can even begin to profit by what Europe offers so freely to the elect. There must be a cordial acceptance of what is there to be found, not a critical attitude which would select what pleases and throw out what fails to conform to a standard, no view of Europe through colored glasses made in America, and no comparing of results with what has been in Sheboygan or Boston, but rather a frank recognition of the fact that certain great works of art and architecture have endured for centuries, that those works have survived by a process of elimination and represent now the best that past ages have bequeathed to us. It is, therefore, up to us not to say whether they are good or bad by relation to any cis-Atlantic standards, but to find out just what they are, how they were conceived and developed; and if we cannot appreciate them, or measure them up, it is our fault and not the fault of the monuments. In a sense, the attitude should be to avoid mere practical subjects, assuming that the student has had already a good American foundation, has built on it the superstructure of discriminating application, and that he does not go to Europe to know what he should do, or how to do it, but rather to develop individuality and æsthetic character. That is the first attitude, and the next is much like it. The young man should feel that he is in Europe to study in the very best and most complete sense, not as a tourist to see the sights, or live the life abroad, not to collect documents as such, surely not for social diversion, but for just one thing—to soak up like a sponge all the fine flavor of Europe and to study it, weigh it and appropriate it until he knows just why it is what it is. With these two attitudes, an open mind and a determination to do nothing but study, the young man is pretty sure to get what he goes for.

But there are several things he must not do. One is do not stay there too long. The length of time a man can profitably remain abroad is partly a matter of temperament, but in most cases it is a fortunate thing that limitations of money prevent a man from staying as long as he would like to. Indeed the man who retains the most fresh and inspiring memories of Europe will be the one who cannot afford to waste any moments, and leaves when he feels the wealth of Europe is just opening before him. I have known of young men who have stayed so long that when they returned to this country they were out of touch with our wants and our aims, were architectural prigs and required a severe dose of Americana to take the taste out of their mouths. Two years is a long time. Three years is altogether too much, and observation of many boys who have gone abroad convinces me that one year intelligently applied is about as much as any one man can make his own.

Another thing, do not take a camera. When a young man starts his preparation for abroad, the first thing he thinks of is a camera, and he goes there, snaps right and left, takes possibly



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very many excellent photographs, but the trouble about a camera is it makes things too easy and substitutes a mechanical act for the digging quality of personal sketching. And the man who uses a camera, rarely sketches. I have known some architects who had the nerve absolutely to refuse to take a camera, or even buy a photograph, and they admit that the value to them of being forced to note their impressions with their pencil in sketch form was one of the greatest factors in their successful study abroad.

Another point—never form entangling alliances. They are very easy to get into abroad. A good fellow is not necessarily a proper architectural travelling companion. Social amenities feed the hungry and often homesick boy, but they can be carried too far and often are, and the young man cannot be too jealous of his time. There is so much to see, so much to do, so much to profit by that he can ill afford to share his opportunities as he goes along with those who do not give quite as much as they take, and this applies also to the architectural schools and academies abroad. Excellent as they are, well intentioned as they all are, they are danger spots for the man who wants to get the best out of Europe.

But there are plenty of things he can and will do. He should know the people in the sense of appreciating the connection between popular emotional life and the corresponding representation in national architecture. That does not mean social diversion, but it means an intelligent study in place of the forces which find representation in architecture. Certainly he should always sketch. Drawing is the language of architecture, and a man cannot get too much of it, provided, however, that he thinks a great deal more than he sketches. And in order to offset the natural tendency to haste and superficiality, the student should draw out a few things very carefully and render them thoroughly, and this drawing and rendering should not be done at home after his return, or during some winter sojourn in one of the large cities, but should be done on the spot, beside the very monument which he is studying so he can transfer onto paper not an impression, but the exact spirit of the monument he has selected. A great deal of this kind of work is not desirable. It takes too much time and interferes with general study, but a little of it is indispensable, and most of our students who go abroad on their own initiative fail to grasp the value of just such kind of work and inevitably come back with a host of sketches but no thoughtful, measured work.

Above all things, too, the student should not let himself be hurried. There are unlimited opportunities in Europe, but he cannot grasp them all. At the most he could hope to catch only the spirit of what he finds and to study a few things well, but if he goes at his work and his study with a sense that he is driven or hurried, that he has no time to pause, to ponder and to sift, his mind in a very few months, even in weeks, will become a blur and he will have to stop and catch up with himself in order to feel that he is doing anything worth while. A man must think a great deal more than he draws or travels, and he should think, too, partly with the help of other eyes. When he is in Rome he should study it with the Letarouilly as a text book; when in France, no better aid could be found than to compare Henry Adams with the glorious French Gothic. I remember very well the advice that a very talented English architect gave to one of the earlier American travelling scholars, telling him not to bother about sketches or envois, or practical considerations, but to sit down in front of Notre Dame, for instance, look at it, study it, admire it, open his soul to it, perhaps go to another equally good monument and absorb its spirit, and then write back to the committee in Boston that he had been looking at a lot of buildings and had not made any drawings. The advice was excellent for that man. It might not be the thing for another one, but the chances are that most men who go abroad will gain more by contemplation and absorption than by mere hard work.

The details of what a man shall do, or shall not do cannot be analyzed or specified so as to be capable of general application to everyone, for the prime object of European study and travel is the development of the artistic character of the individual. It must never be forgotten that foreign travel is not fundamental, but psychological, and of all the arts, certainly architecture is the one which has the most vivid, and at the same time most intangible soul.

Now as to travelling scholarships. Shall a man consider that they offer the very last word in his architectural education? Again it is a case of the individual, but generally speaking, any man who can win one of the real architectural scholarships which sends him abroad not to vegetate, not to waste his time on unnecessary drawings, but really to study, can call himself singularly fortunate and by all means he should try, for even if he fails, the very trying is a pretty good preparation for independent travel. The advantages of a scholarship are partly in the name and reputation which come to the man in its association with others who have gone before and who will come after, but chiefly as compared with the independent scholar in the fact that it offers certain definite restraints and incites to a definite and continuous program. Of course, a man may merely wander over Europe, follow his sweet fancy and come back with a mind immensely enriched; but if that same man will go with a definite program both as to time, and place, and subject, and will loyally submit himself to the guidance and the friendly discipline of those who are striv-

ing to make him find his best expression, he will profit far more and that gain will be more lasting than if he were all by himself. The architectural scholarships are not only fine in their influence on the men who hold them, but they are constantly building up the standards for the hundreds of boys who go abroad every year alone.

A course of study and travel abroad is a complement to preparation for practice, provided that study and travel are truly educational and really develop personality, but it cannot be said that such a course of study is necessary, or that a man cannot be an architect without it. It is simply a capping stone and crowning feature of an architectural course. We are so busy here all the time that we need a constant stream of imaginative enthusiasm for pure architecture to be injected into our daily grind of work. We would not have that daily grind any less, but we want to bring to it all the romance and beauty that has endured from the past and put these factors at our service in the real problems that America is working out so thoroughly today. The real object of foreign travel is to teach the young men to think a great deal more than they draw, to dream dreams that are full of architectural wealth, to cultivate an æsthetic imagination which will be an improvement upon our own and to enable them to come back to this country not charged with photographs, with many pencil sketches, with laboriously rendered drawings, but surcharged with at least an understanding of the divine afflatus which is the necessary endowment of a great architect, filled to the brim with the idealized enthusiasm which can be so stimulated by those great works of the past, and conscious that the inheritance of the ages is not limited to France or Italy, but that it can be made our own right here today in these, our United States of America.

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# HOW AN ENGLISH ARCHITECT VIEWS AMERICAN ARCHITECTURE

MR. WILLIAM PATTERSON, F. R. I. B. A., in a letter referring to an article on American Architecture, printed in the *Journal of the R. I. B. A.*, and reprinted in a previous issue of THE AMERICAN ARCHITECT, states:—

Living near New York for over two years, may I add to Mr. H. Austen Hall's extremely interesting and instructive article? "American architects are more successful in the handling of the larger problems of design than we in England," says Mr. Hall. He is right. Of this there is no question.

Compare the Pennsylvania Railway Station and Boston Public Library (McKim, Mead and White) with several recent buildings within a short distance of Charing Cross. The comparison is very unfavorable to the work in London. Especially is this the case in regard to the detail. The station mentioned is an ideal conception of what a railway terminal ought to be. The Morgan Library is certainly a "gem," as Mr. Hall says, being perhaps the most perfect example in delicacy of detail of its kind, resembling the atmosphere of Chopin in a more solid form. The great care bestowed on the detail of many of the more notable public and semi-public buildings in this country is most marked. A careful note of these facts is well worth recording. I was particularly struck, when visiting the Boston Public Library, with the entasis on the columns of the arcade in the quadrangle. The proportions were perfect. Often with little or no ornament, and with great simplicity of detail, massive and imposing effects are produced in a manner almost unknown in England. Although the "loft" building or "skyscraper" may not create much feeling of restfulness or repose, the way in which many of these have been handled is very skilful, and one cannot help admiring the ingenuity and inventive faculties exercised in overcoming difficulties in their design and execution. Lord and Taylor's Store, Fifth Avenue, is a fine example of what a "department" store can be. What Mr. Hall says is again very true. Because a building is of large scale there is no reason why the detail should be coarse and unrefined. The detail of the stonework on the two lower floors of this building with balcony above would well repay a visit to New York to anyone who contemplates the erection of a large structure of a similar nature in London or elsewhere. Many of the banks would astonish most Britishers who have never seen an American banking institution—examples, again, of designs beautiful in detail and proportion. A notable addition to the Gothic style of architecture is to be found in New Haven, an old-fashioned university town.

The new Memorial Quadrangle at Yale University is a charming building, characterized by great skill in the handling of the stonework which is most effective. It is a fine example of modern Gothic. Generally speaking, however, not very much enthusiasm can be aroused for Gothic work



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in the United States compared to English work of a similar nature. Of modern buildings in London the Roman Catholic Cathedral, Westminster, can worthily take its place with any building in America. Allow me again to endorse Mr. Hall's remarks when he refers to the "old Colonial style," in the development of which there is room for much scope, as evinced by numerous fine houses by Mr. Platt and others. The Southern Colonial style is especially charming, and numerous fine old examples still exist which can be adapted to the designs of the modern American house with delightful effect. Regarding domestic work, Mr. Hall again says that "England has long been supreme." Yes. The best types of modern domestic architecture in England still hold a unique position. There is a peculiar charm and fascination about the houses of Old England never surpassed in any country. The Englishman still holds the field in domestic architecture.

Two Designs for Playing Cards by Edith M. Magonigle, President, National Association Women Painters and Sculptors, exhibited at the recent exhibition of the Architectural League of New York

# ·EDITORIAL·COMMENT·

**AT ONE TIME OR ANOTHER,** THE AMERICAN ARCHITECT has felt it a duty to refer to misleading statements in the daily press and journals in fields other than architecture. This journal has always expressed regret that such conservation of the rights and dignities of the profession of architecture should apparently be only through the unofficial press. Forty-six years ago, at its inception, THE AMERICAN ARCHITECT, then the only architectural publication in this country, declared its purpose to uphold the honor of the profession. This it has since invariably done, and so it will always continue to do. But there was reason to assume when the Institute decided to take up technical journalism that its purpose was identical as to the dignities of the profession with the course pursued by THE AMERICAN ARCHITECT, and the editors of that journal naturally believed they would have a responsive and closely working ally.

On each occasion when there have been widely disseminated statements derogatory to architects and the true interpretation of their professional activities, THE AMERICAN ARCHITECT has waited for some action on the part of the *Journal*. It cannot recall a single instance when these aspersions have received official notice.

*Engineering News-Record*, in its issue of March 30, prints the following editorial under the title, "Architectural Responsibility." It states:

> Ultimately a single brain and conscience, the personality of one man, stands back of any structure and guarantees its safety. The architect is that man in the case of buildings. Does he, in fact, assume and fully discharge this responsibility, or is it merely a matter of form? That is the outstanding query resulting from the Knickerbocker disaster, and it is squarely up to the architectural profession to answer it. If the architect's creative responsibility, and the associated guarantee of adequate construction, is a mere historic form, without substance, it is time that the facts were known to all the world and time that other means to guard public safety be provided. If the responsibility is still to be regarded as real, it is time that steps were taken to make it real. The point at issue is a condition such as found in the Knickerbocker case—and such conditions, it must be admitted, are far from uncommon—where the architect gives careful attention to the externals, the appearance of his structure, but depends for the vital matter of making the structure safe upon an interested party, namely, a sub-contractor, without even an attempt to check the result. If the responsibility for the safety of a building may be thus divided and farmed out, what is left of the personal and competent answerability of the architect for his structure? What is left of the architect? The practices and laws requiring buildings to be planned by architects, and all plans to be duly accredited by his signature, have been regarded by the public as an assurance of safety. It is no assurance of any kind, however, unless the architect definitely assumes the responsibility implied, and shapes his practice so that his guarantee is real and not a sham.

Do architects fully assume and discharge their responsibilities, or are their services rendered as a matter of form?

An unusual opportunity is at hand for the American Institute of Architects, as the highest architectural authority, to state exactly its attitude towards the entire profession.

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**ARCHITECTS WHO ARE ABLE** during seasonal periods to visit resorts in search of recuperation, rest, or the always fascinating golf, will have become impressed with the inartistic tendency of the architectural development of popular resorts. While there may not be as much opportunity for unfavorable criticism of the various towns along our Atlantic seaboard, where the tourist flocks because of its picturesque and quaint allurements, popular towns in the South are not as fortunate in their development.

Towns with a normal population of approximately ten thousand, grow at the season's opening to four times that number, and as quickly at the season's close dwindle to their "native" population. The demand for housing, more generally of bungalow types, becomes at one time enormous and at another the towns take on scenes of desolation.

The structures erected are by no stretch of imagination, architectural. Men from every state of the Union, allured by the attractiveness of climatic conditions, seek to build a house where during certain periods each year they may live with their families. In most cases these men ignore the local architect, and bring with them plans from which they build a house. The result may be easily imagined. The man from Chicago builds a house purely middle Western in character, while the man next door, who "knows nothing about architecture, but knows what he likes," gets his builder "back home" to "fix him up a set of plans." Across the street, a certain "studio dweller" from New York, whose ideas of living are based on Greenwich Village lines, constructs a house, the delight of his cubist friends and the demoralization of the neighborhood. Meanwhile, as these resort towns grow, the transient population keeps on building and continues to ignore the traditions of the neighborhood or the conditions of climate.

The results of this irresponsibility are everywhere apparent. Locations that attract by reasons of climate or picturesqueness, soon become so unattractive by reason of their lack of coherent architectural development as to repel the best types of men and women who seek a residence for definite periods.

The remedy for these conditions lies wholly in the hands of those who are responsible for the town government. The present attitude seems to be



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based on a desire to attract those with money to spend, ignoring proper supervision as to how it should be spent. It is, of course, to be noted that town governments are composed of all-the-year-round residents. Their zeal to promote the town's growth, outruns their knowledge as to how it should best develop. When too late they learn that civic development does not depend so much on the amount of money spent or invested, as it does on the manner of its disbursement.

What these resort towns need to encourage is some organization along lines of local municipal art societies. Where the transient resident, who desires to build, may submit his plans for criticism or advice, or where he may be able to select a design, created with special reference to the artistic upbuilding of the neighborhood of its location.

The simple suggestion as to the necessity for some procedure of this sort should be sufficient. Those who are really earnestly desirous of effecting a necessary reform should be able to work out its details.

As a suggestion, it might be well to direct attention to the work of the Housing Board during the war. A group of competent architects spent three years in research and in the planning of communities for locations all over the grand divisions of the United States. The comprehensive reports of these well directed activities were published by the Government in a ridiculously limited edition, at once exhausted. These reports should be reprinted, made available and placed at the disposal of every community. Their use in the development of the class of resort towns to which we are referring would be of the greatest value.

THE EDITOR OF *The Architect,* of London, devotes considerable space in a recent issue to a discussion of the underlying reasons for nightmare. "We may possibly," he states, "put down many imaginative results to indigestion inadvertently or intentionally produced." It is logically deduced from that premise, that designs evidently created by a disordered mind, often called "nightmares," are the logical result of indigestion. It is admitted that the work of architects is often a nightmare and it is assumed that such conditions arise from the failure of the architect or the client properly to assimilate some mental or artistic food.

Having proceeded thus far to account, in a measure, for much of the bad architectural design that is always in evidence, this writer constructively seeks to state a method of architectural education that he believes will allay mental indigestion and mark a course that will lead to calmer and more rational periods.

Attention is directed to the fact that medical students do not, as do artists, concentrate on the contemplation of perfection, but find their greatest joy in investigating the worst afflictions to which humanity is prone. It is by such methods they would seek to check the spread of disease and to maintain a perfectly normal physical state.

"Then," it is asked in this editorial, "should not the architectural student follow a similar course?" In other words, the student might be taught how not to do it, and would find the best training in the offices of the mediocre practitioner.

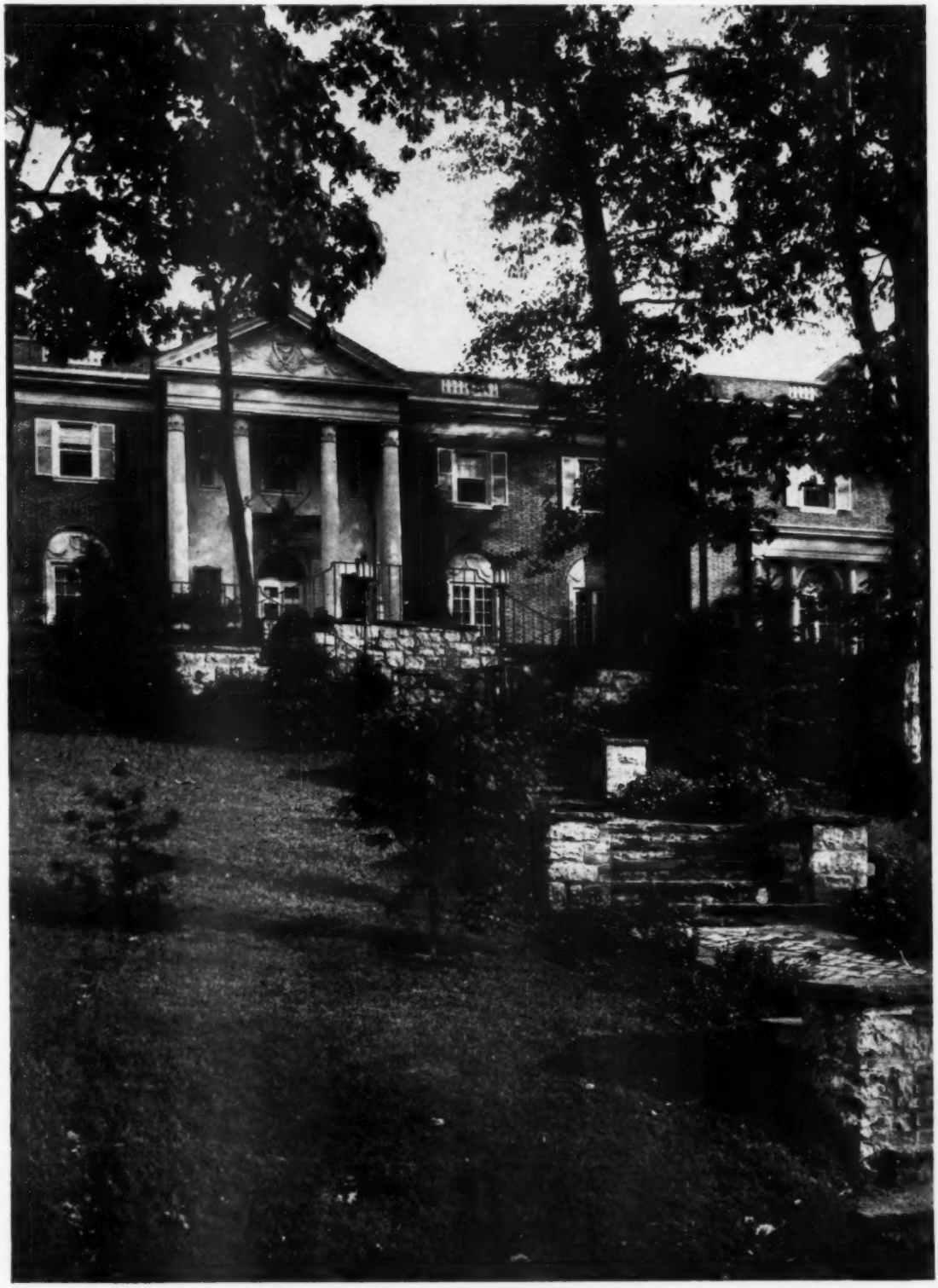
This suggestion has all the charm of originality and will no doubt greatly interest that large number of the architectural profession who are now seeking to devise some better curricula for our architectural schools.

WEST FAÇADE

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

*(For first and second floor plans see page 308)*

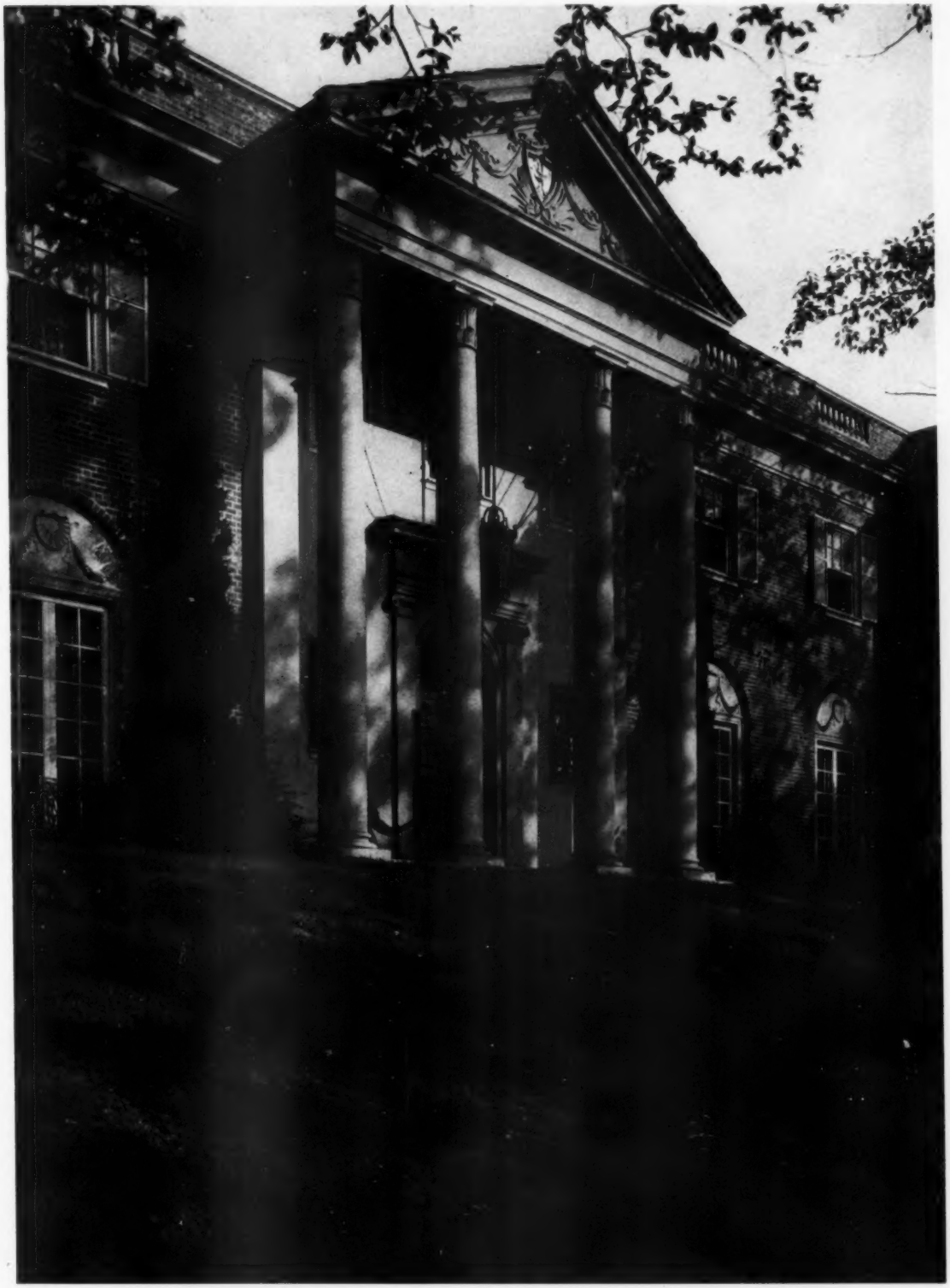


WEST APPROACH

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

XUM

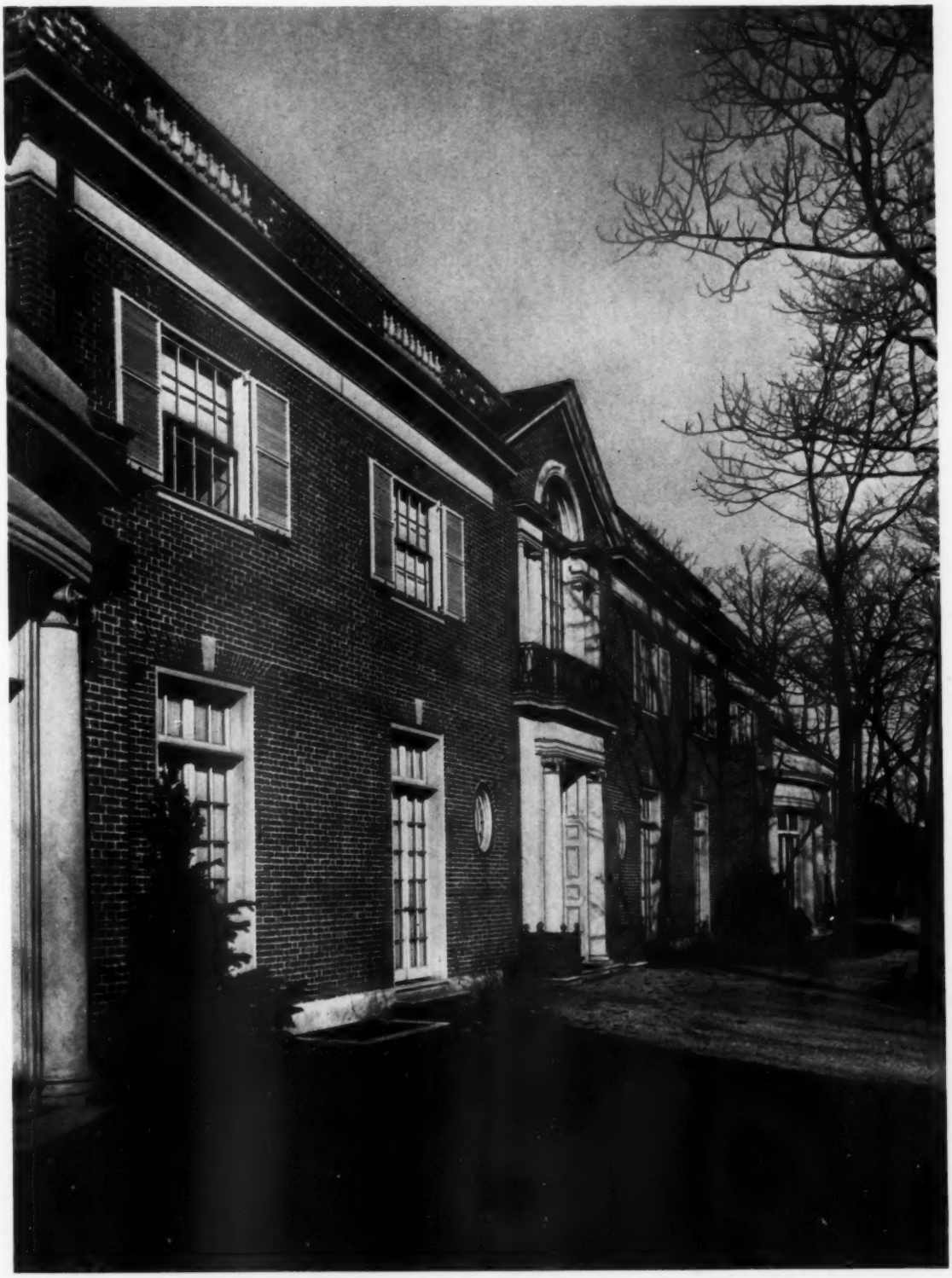


WEST PORCH

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

XUM

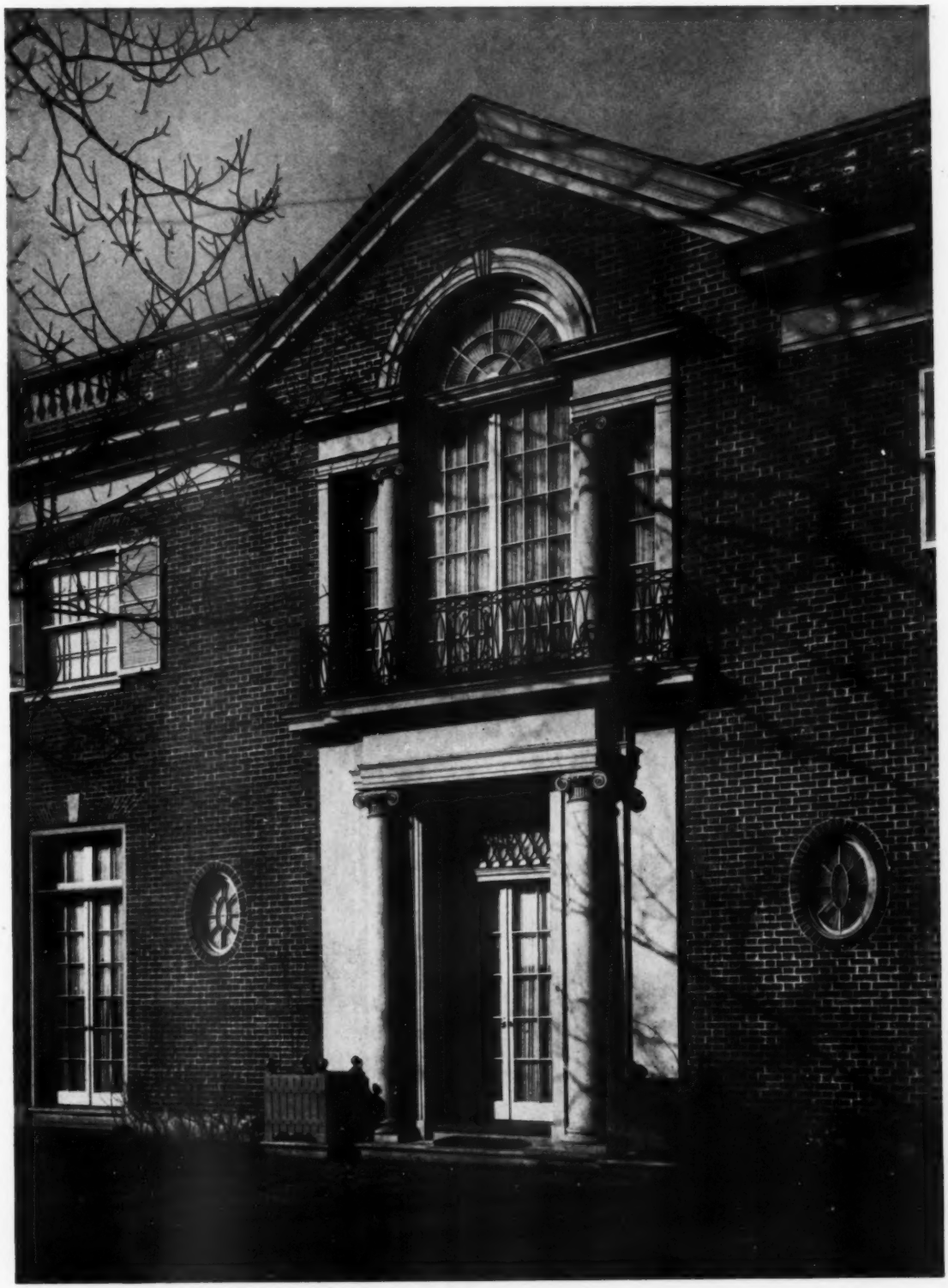


VIEW ALONG FRONT FAÇADE, EAST SIDE

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

XUM



ENTRANCE ON EAST SIDE

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

XUM

REAR OF WEST SIDE, WINDOW OF DINING ROOM IN FOREGROUND

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

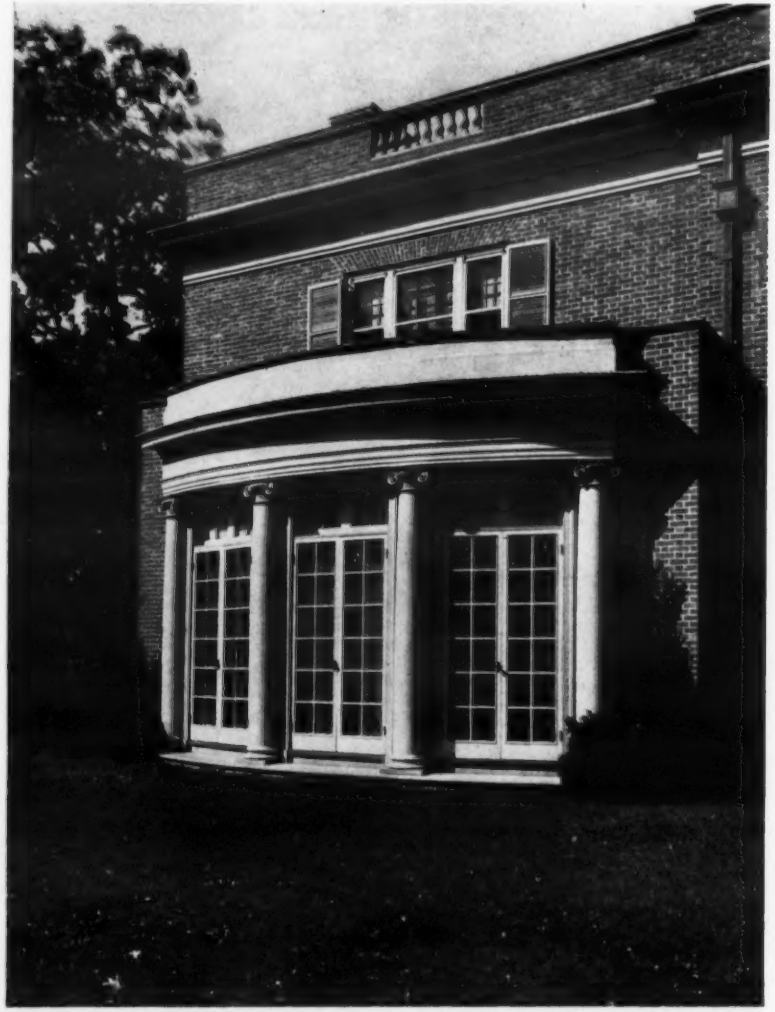
XUM

DETAIL OF WINDOW

SERVICE PORCH

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT



WINDOW ENTRANCE FROM LIVING ROOM TO TERRACE

GARAGE FROM SOUTHEAST

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

DINING ROOM

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

MANTEL IN LIVING ROOM

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

XUM

BREAKFAST ROOM

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

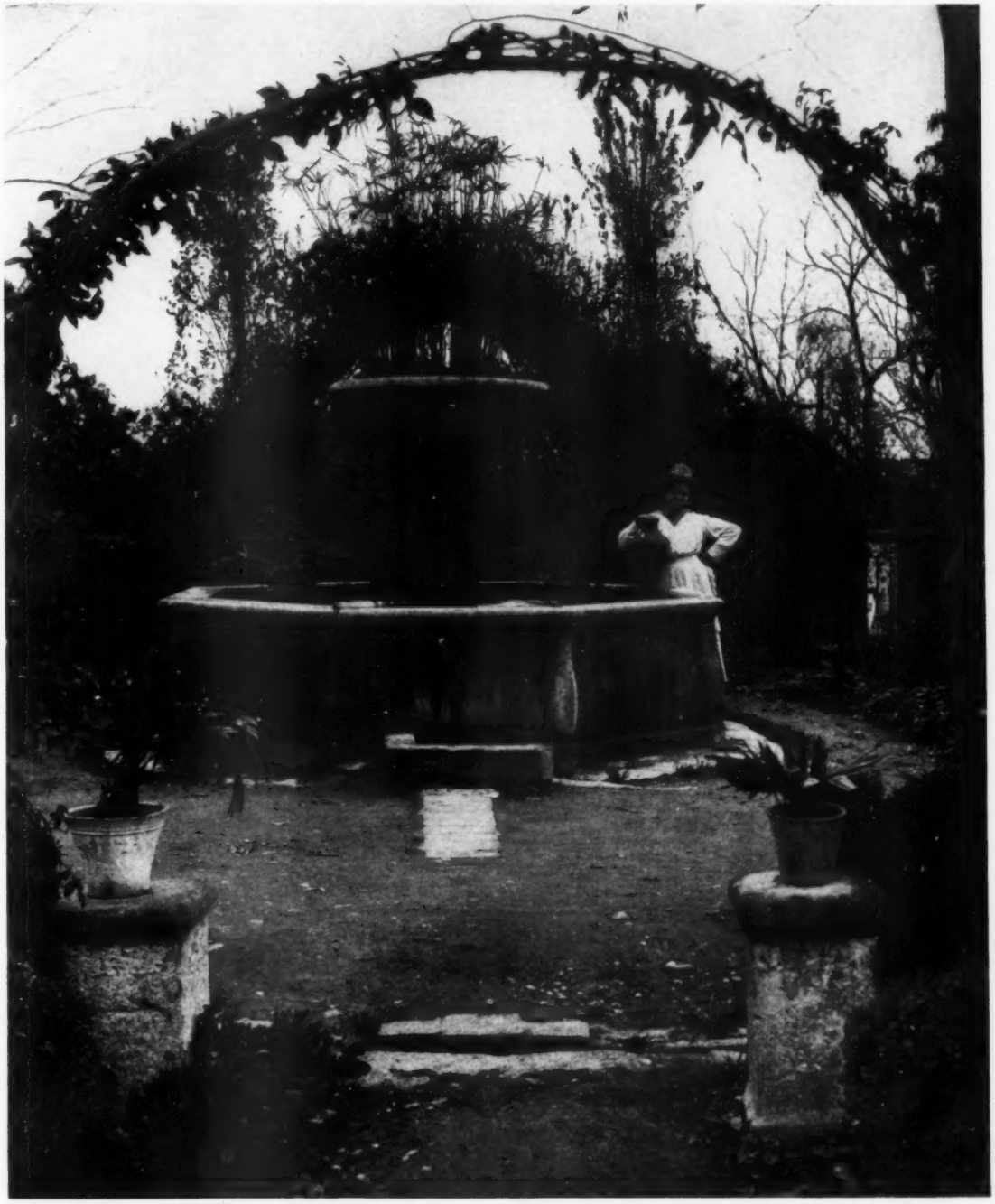
DWIGHT JAMES BAUM, ARCHITECT

LIVING ROOM DOORWAY TO HALL

STAIR HALL

HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT



AN OLD ALCAZAR GARDEN, CORDOBA, SPAIN

IT WAS ABOUT THIS QUAINT OLD FOUNTAIN AND ALONG THE OVERGROWN PATHS THROUGH WHICH COLUMBUS WALKED WITH QUEEN ISABELLA WHILE URGING HER TO FURTHER HIS ENTERPRISE OF DISCOVERY

*(See "Gardens—Old and New" by Francis Howard)*

XUM

VIEW IN THE PRIVATE GARDEN OF THE MARQUIS DE VIANNA, CORDOBA, SPAIN

THE SUNLIGHT AND SHADOW ON VINECLAD WALLS AND GARDEN BOTH CREATE A BEAUTIFUL ENSEMBLE

*(See "Gardens—Old and New" by Francis Howard)*

XUM

STAIRWAY LEADING TO A TERRACE IN AN OLD ALCAZAR GARDEN AT CORDOBA, SPAIN

*(See "Gardens—Old and New" by Francis Howard)*

XUM

A PRIVATE GARDEN IN CORDOBA, SPAIN

AN EXAMPLE OF THE ACCOMPLISHMENT OF A MOST ARTISTIC EFFECT BY THE USE OF THE SIMPLEST MATERIALS

*(See "Gardens—Old and New" by Francis Howard)*

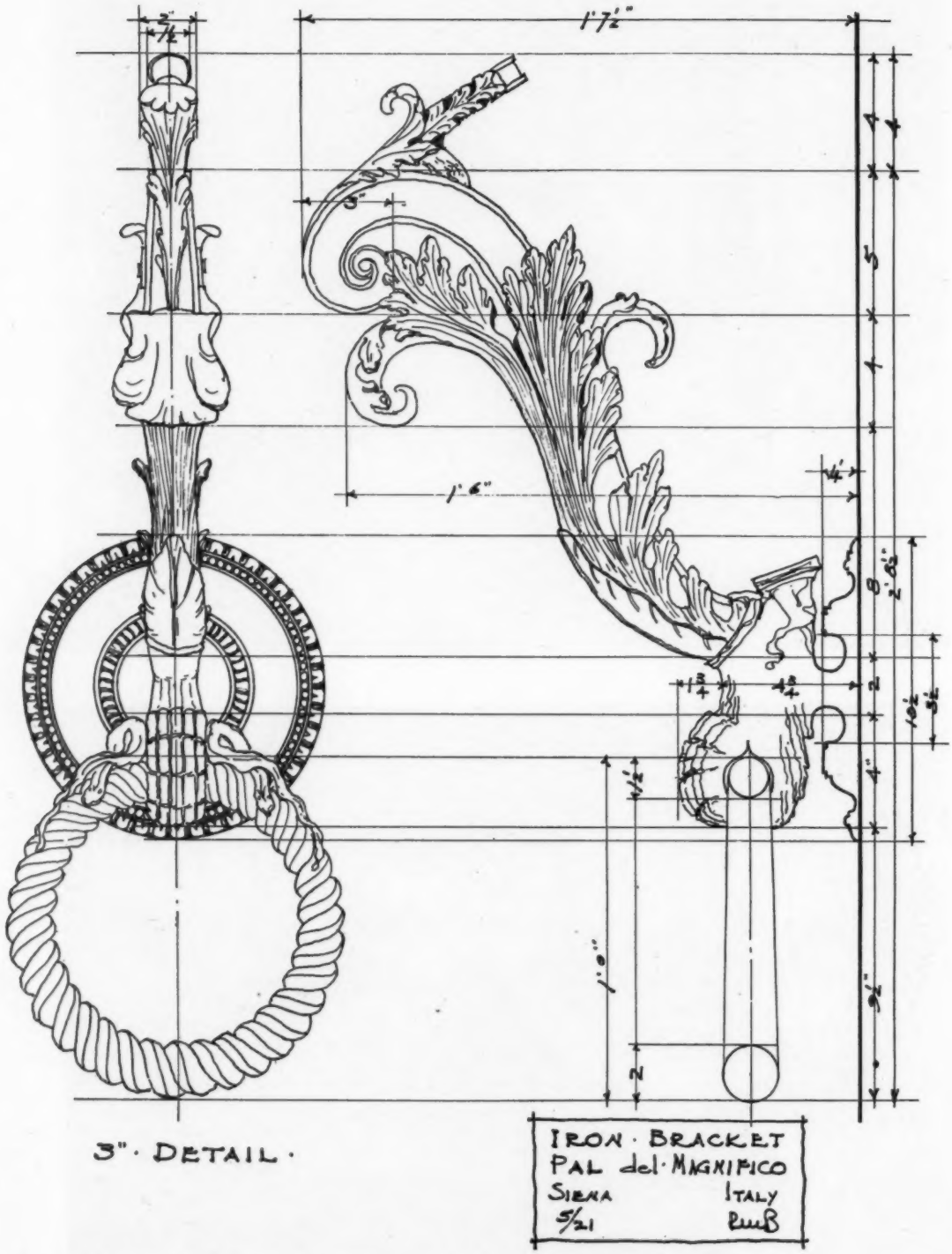
XUM

IRON BRACKETS, PALAZZO DEL MAGNIFICO, SIENA, ITALY

*THE AMERICAN ARCHITECT, SERIES II.*
*FRENCH AND ITALIAN DETAILS*

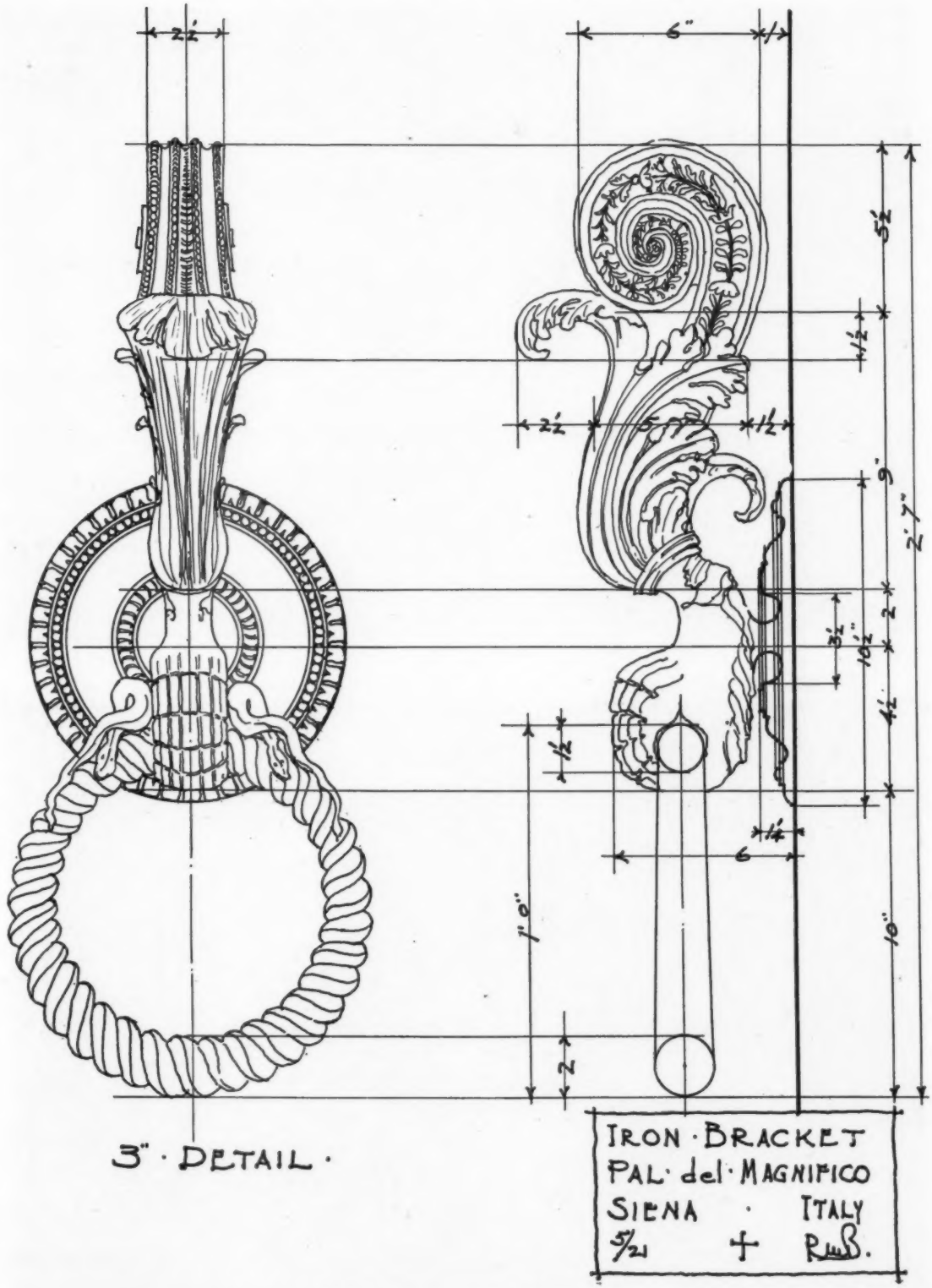


XUM




MEASURED AND DRAWN BY R. M. BLACKALL, 35TH HOLDER, ROTCH TRAVELLING SCHOLARSHIP

*THE AMERICAN ARCHITECT, SERIES II.*
*FRENCH AND ITALIAN DETAILS*

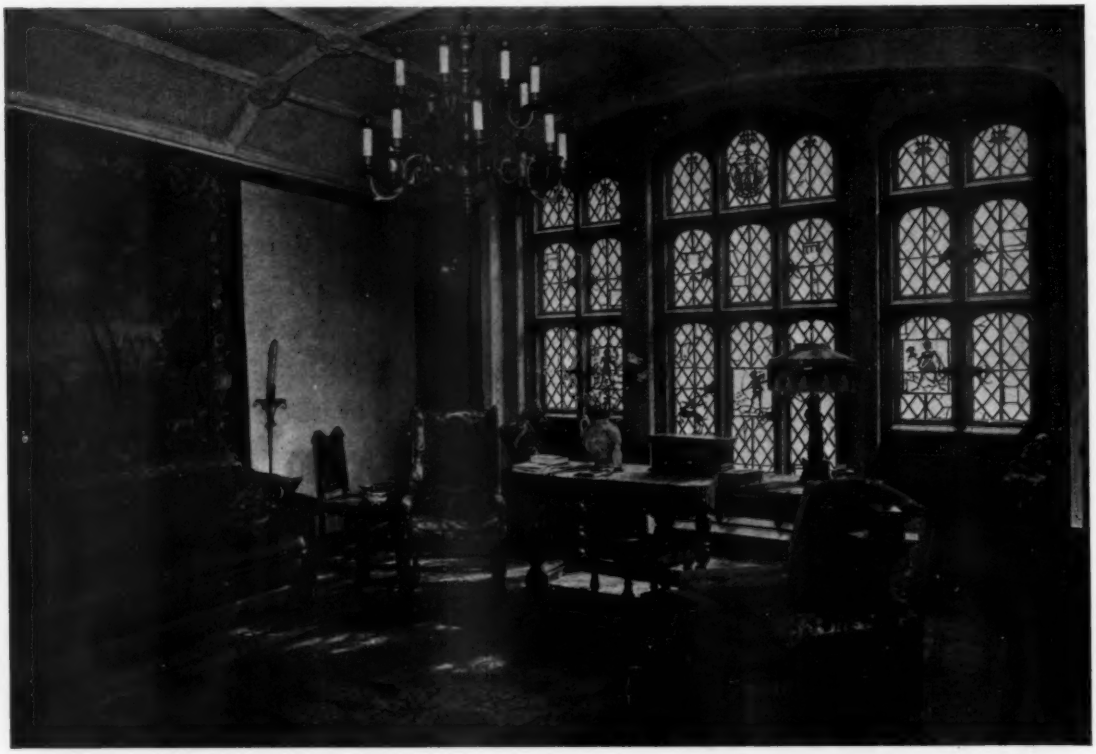



MEASURED AND DRAWN BY R. M. BLACKALL, 35TH HOLDER, ROTCH TRAVELLING SCHOLARSHIP

*THE AMERICAN ARCHITECT, SERIES II.*
*FRENCH AND ITALIAN DETAILS*



XUM

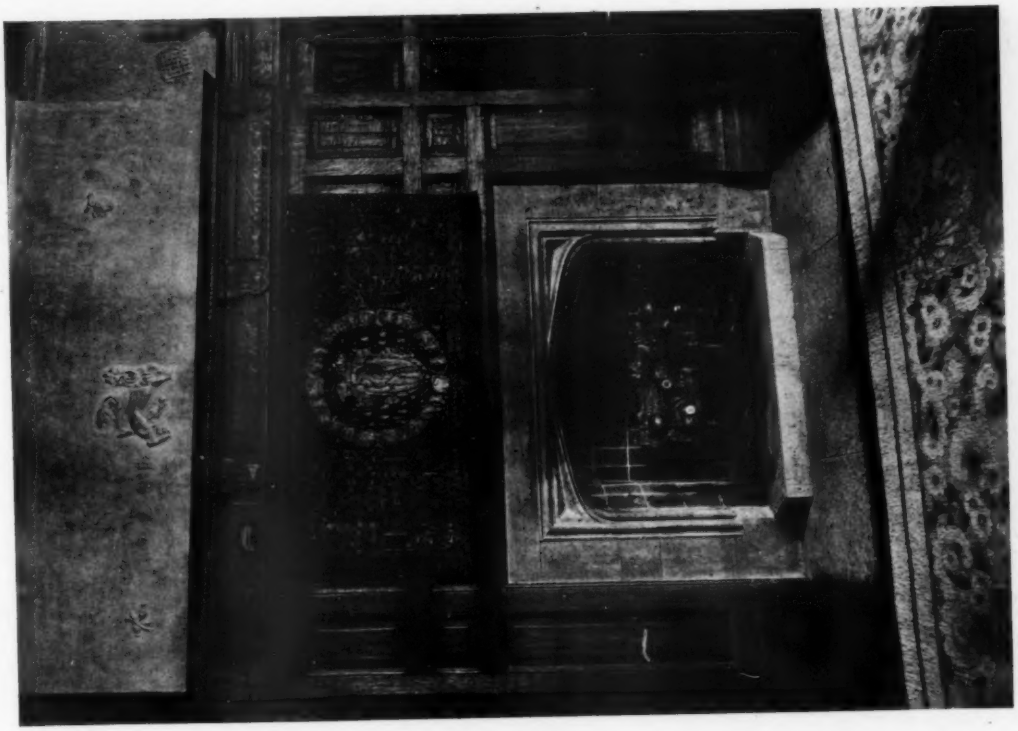


LIVING ROOM

DINING ROOM

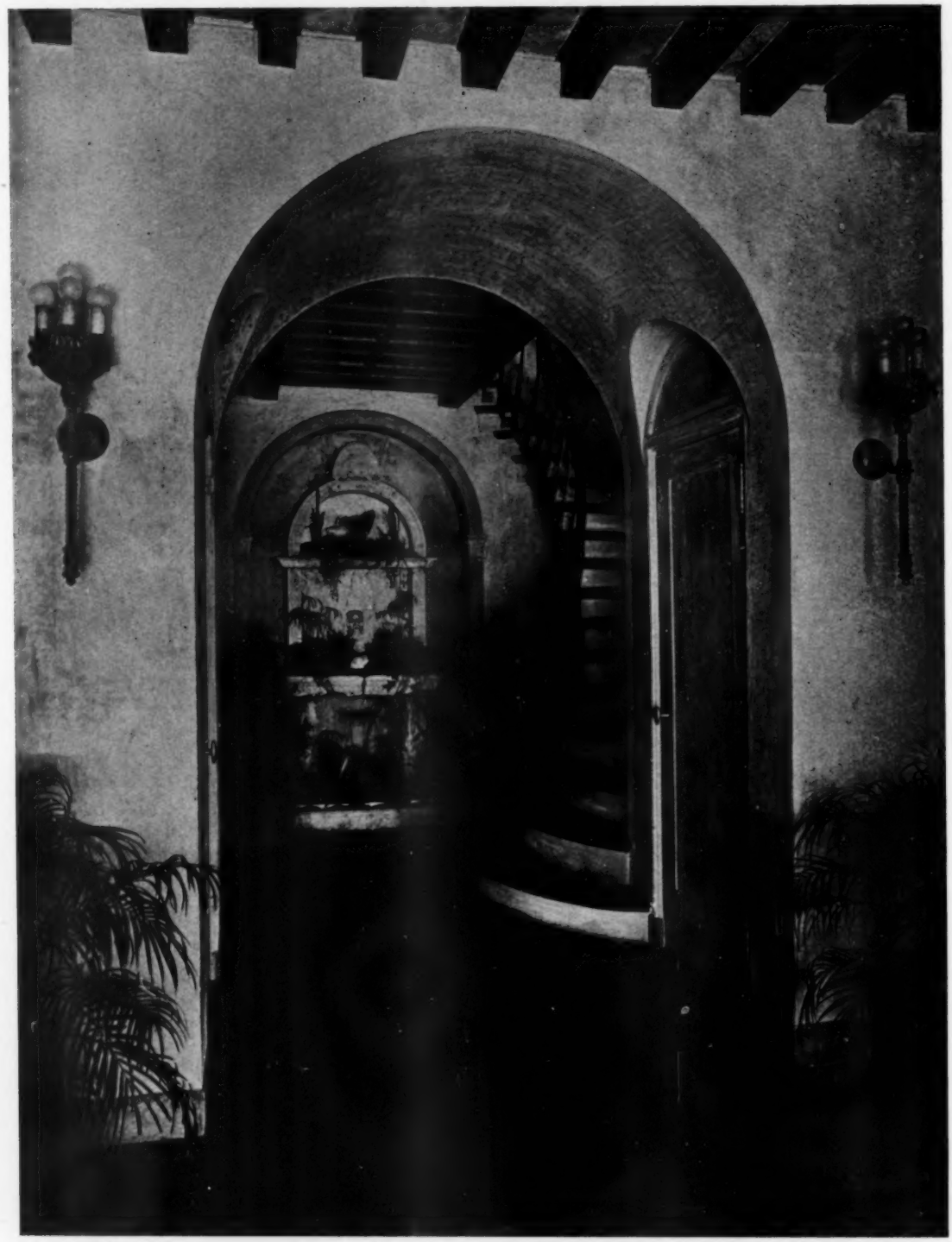
HOUSE OF DUDLEY D. SISHER, NEW YORK CITY

TAYLOR & LEVI, ARCHITECTS



MANTELS IN HOUSE OF DUDLEY D. SISHER, NEW YORK CITY

TAYLOR & LEVI, ARCHITECTS



HALL IN HOUSE OF DUDLEY D. SISHER, NEW YORK CITY

TAYLOR & LEVI, ARCHITECTS

STAIRWAY IN HOUSE OF DUDLEY D. SISHER, NEW YORK CITY

TAYLOR & LEVI, ARCHITECTS



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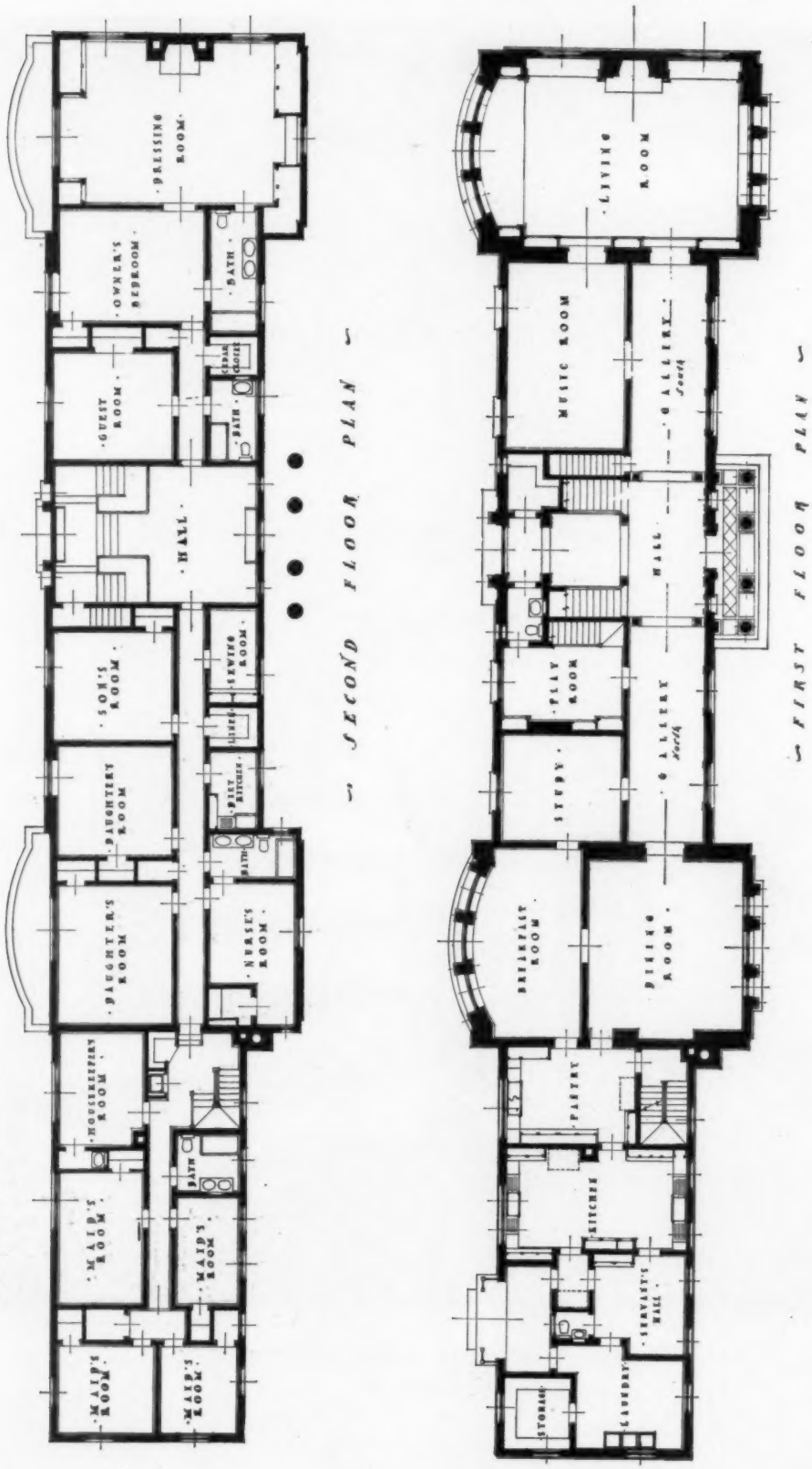


HOUSE OF WM. P. HOFFMAN, ESQ., RIVERDALE, N. Y.

DWIGHT JAMES BAUM, ARCHITECT

*(For exterior and interior views see Plate Section)*

# LEGAL DEPARTMENT

Conducted by

CLINTON H. BLAKE, Jr., of the New York Bar

LAST month in these columns I had occasion to note the fact that the employment of an architect is a contract of so-called personal employment, and, as such, terminable at will by the employer, subject, however, to the right of the architect to hold the employer liable in damages for any breach of contract.

The fact that the relationship between client and architect is a personal one, gives rise to a very interesting question: To what extent can an architect delegate his authority to others?

It is and has long been a firmly established rule and the law of England and of this country, that an authority founded on the personal equation and dependent for its exercise upon the discretion and judgment of the one to whom it is granted cannot be delegated by the latter to another.

This rule is based on good sense and good law. If you employ a certain lawyer to draw your will, because you believe that he is especially skilled in that branch of law, you would not expect him to delegate all responsibility in the matter to another. In the case of the employment of a physician, the personal element is even more accentuated, and so in all cases of professional employment the employer depends—to a greater or less extent, but somewhat, always—on the personal judgment, character or ability of the professional man whom he employs.

It is equally manifest, however, that there are many details of a professional man's duties which can be delegated to his assistants without in any way endangering his client's interests. The full scale drawings, for instance, carrying into effect the scheme evolved by the architect, can be turned out by proper draftsmen, without the client's interests suffering because it was not the hand of the architect that actually guided the pencil. Even in the case of the will, if the lawyer asks a competent clerk to prepare a draft and then personally passes on it and makes corrections, when necessary, the client's interests are fully protected. The completed work represents the judgment of the lawyer and not simply that of his clerk.

And so there have grown up in the law, certain well-recognized exceptions to the ordinary rule. Generally speaking, where an act is purely ministerial, as distinguished from discretionary, it may be delegated to another. The copying of drawings and the transcribing of testimony are obvious instances of such ministerial acts. Another exception to the rule is in the case of an established custom or trade usage.

There is such a custom and usage in the architectural profession—and long has been. The early decisions in England, referred to, failed to recognize the common sense of the matter, as distinguished from the strict letter of the law, and held that an architect or engineer must himself personally make measurements and computations and attend to all the similar duties entering into the preparation of plans and specifications and the superintendence of the work. Gradually the rule was broadened, however, and the necessity and justice of a more liberal construction realized. Today as the law has developed and the custom of the profession has become established, the architect may turn over to others practically any of the details of his work, the preparation of sketches, plans, and specifications and the superintendence of the work, always provided, however,—and this is of fundamental importance—that he retain the general oversight and control of what is done, and remain the directing and over-seeing mind and force.

While the practicalities of the situation have been recognized in this way, there are many cases where the architect cannot safely delegate his powers to another. He cannot take advantage of the liberality of the rule in its application to his profession to slough all real responsibility. The client in the ordinary case depends upon his artistic ability and expert knowledge. He must be diligent to see that in delegating work to others, he yet retains such oversight and control, that the design made and work done properly represent his own conception and judgment. He may select competent designers, but the designs should take form under his guidance. He may employ competent supervising assistants, but if the work is not properly superintended, he must respond in damages to the owner for all defective work resulting from the improper discharge of their duties by his subordinates.

Where a special contract provision is inserted, to the effect that the architect may or may not delegate all or any of his powers and responsibilities, this provision will control, and no amount of general custom will allow the parties to depart from the clear terms of the agreement which they have made.

In general, the architect will do well to follow the conservative course and, in the absence of specific permission from his client, not delegate his authority or discretion to others in those cases where there can be any question of his right to do



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so. A simply but properly worded clause in his contract with his client will meet the needs of ordinary situations and allow the architect to make full use of his office staff and organization without exposing himself to the charge that he has turned over to others the performance of work which he should do himself.

## LEGAL DECISIONS

THE building contract provided for the construction of a building on a cost plus ten per cent basis. It further provided that "the estimates of the contractors made in writing from completed drawings and specifications and full information, will be correct to the extent that the cost will not exceed the estimate more than five per cent." Before the execution of the contract, a letter was written to the architect by a contractor, giving an estimate much lower than the actual cost at which the building was erected. The letter was not made part of the executed contract, and no express reference was made to it in the executed contract. The owner later sued this contractor, claiming that he had been overpaid by the difference between the amount paid him and the amount of the estimate contained in his letter. The court held that the letter, under such conditions, could not serve as a basis for determining the owner's rights against the contractor; that to make a building contract valid, it must have the necessary element of certainty just as in the case of all other contracts; that a contract may be made sufficiently certain to come within this rule if it contains proper references to other documents or plans or specifications. Each such reference, however, must be sufficiently definite and clear to identify the documents or plans or specifications to which reference is made. The letter in this case not having been referred to in this way and so sufficiently identified, the contract, on the basis of the letter as claimed by the owner lacked the necessary element of certainty and was not valid and the owner could not recover.

*Brown-Randolph Co. v. Gude et al,* 106 *Southwestern* (*Georgia*) 161.

THE sub-contractor brought suit against a contractor for the amount due him under his contract. The contractor claimed that the work of the sub-contractor had been defective and withheld the payments due the sub-contractor. The latter refused to make good the defects of which the contractor complained and refused to continue with the work. The contractor completed the work of the sub-contractor at a cost in excess of the contract price. It appeared that there were a number of defects in the work of the sub-contractor, but that they were minor defects and that be had complied with his contract in all substantial particulars. The court held that a substantial compliance on the part of the sub-contractor with the terms of his contract was sufficient; that the defects were immaterial or not defects for which the sub-contractor was responsible; that the contractor could not recover from the sub-contractor the cost of completing the work after the sub-contractor's refusal to continue, and that in an action by the said contractor for the amount due under his contract, the burden was on the contractor of establishing his right to offset against the amount due the sub-contractor the cost of completing the work.

*Henslee v. Mobley,* 230 *Southwestern* (*Arkansas*) 17.

THE Charter of the City of Seattle provided that "no contract shall be sub-let except for the furnishing of material, without the previous consent of the City Council." A contractor for city work sub-let the contract for labor and for superintendence in certain excavation work for the piers of a bridge. The City Council did not consent to the sub-letting of the contract. The sub-contractor abandoned the work when it was substantially one-half complete, and claimed the right to recover against the contractor on *quantum meruit,* viz: for the reasonable value of the work done, irrespective of the amount of the compensation named in his contract. The court found that a contract had been made between the contractor and the sub-contractor in the sense that their minds had met and that they had agreed on the essential terms. The court held that the contract was voidable by either party at any time, prior to the City Council giving its consent to it, and that the sub-contractor, accordingly, had the right to consider it as voidable and abandon the work, as he did; that the contract, while voidable and so in a sense against public policy, was not, however, to be classed with contracts which are considered void in the law or voidable because they are "immoral" contracts, and that inasmuch as the parties had proceeded under it, the compensation to be paid to the sub-contractor would be measured by the contract, and that he would not be allowed to recover a larger amount on the theory of *quantum meruit;* that inasmuch as the amount paid to him at the time when he abandoned the contract was substantially one-half of the total amount of the contract, and inasmuch as substantially one-half of the work had then been done, he had been paid in full and could not recover anything further.

*Dyer etc. v. Pederson,* 192 *Pacific* (*Washington*) 1002.

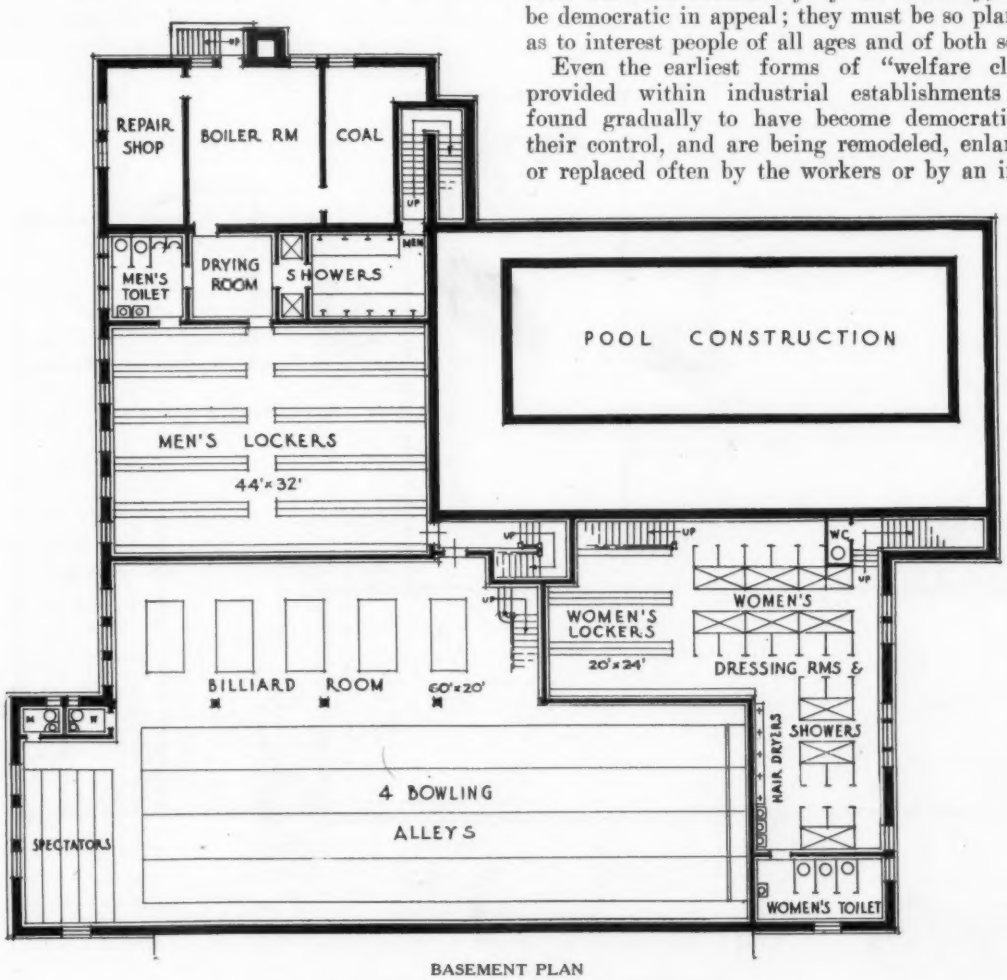
# COMMUNITY BUILDINGS FOR INDUSTRIAL TOWNS

BY MARTHA CANDLER

THE industrial center club building is not a new idea either in this country or in Europe, but there are strong present day tendencies in such buildings which are a definite post war development. How marked these tendencies have become may be observed by a study of "Community Buildings for Industrial Towns," a publication just issued "to meet the needs of a large number of industrial organizations, individuals and communities."

This publication, the result of studies of the whole field made during 1921, is largely a discussion of some carefully chosen examples of such buildings from the standpoint of architecture, administration and scope of activities. There are conclusions to be drawn from it which cannot fail to interest the local architect. Notably: there is a large and steadily increasing demand for industrial center buildings; these buildings, even when financed solely by the industry, must be democratic in appeal; they must be so planned as to interest people of all ages and of both sexes.

Even the earliest forms of "welfare clubs" provided within industrial establishments are found gradually to have become democratic in their control, and are being remodeled, enlarged, or replaced often by the workers or by an intra-works organization representing the employers and the employed. The latter, no less than the former, have "come to realize more fully the significance of recreational activities which identify the worker with community life. . . . The community house, where the worker in his leisure hours meets the people of the neighborhood who




BASEMENT PLAN

COMMUNITY BUILDING—SCHEME "B"

JALLADE, LINDSAY & WARREN, ARCHITECTS

may or may not be associated with him in the industry, helps to provide an outlet for the normal instincts of sociability and companionship."

Those responsible for the newest and most distinctive developments in industrial center social buildings have been noticeably alert in incorporating into them just those features which have contributed most to the success of the memorial community buildings of the country. While nothing approximating a standard of community house architecture has developed to date, a study of the World War "memorials of democracy" the country over will show that there is a well defined minimum of requirements for the building of a given type. These requirements, adapted to the

BASEMENT PLAN

COMMUNITY BUILDING—SCHEME "C"

JALLADE, LINDSAY & WARREN, ARCHITECTS

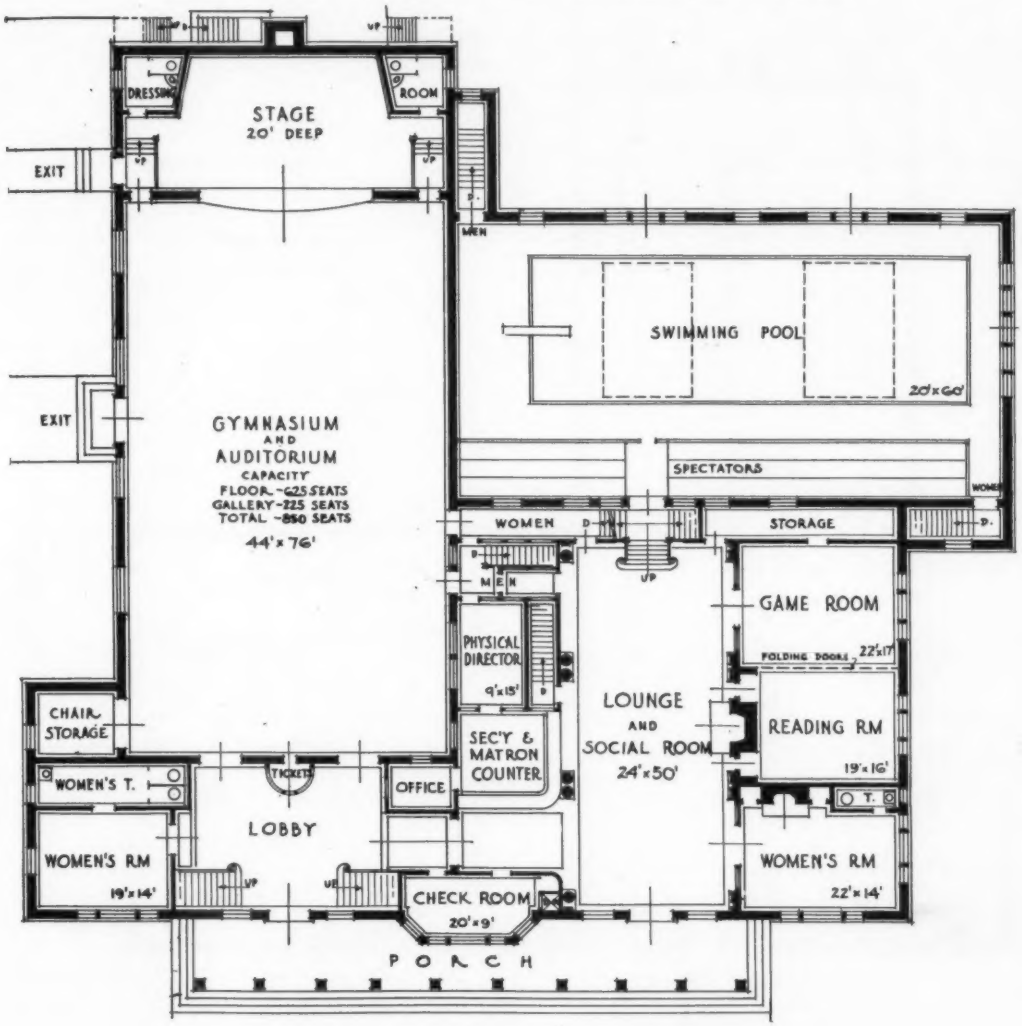
mands as well at least some degree of social mindedness on the part of the architect if these buildings in the aggregate are going to develop into something really fine, into a genuine contribution to the social life of America. If the auditorium, for instance, is successful as a gymnasium, it will inevitably develop an enthusiasm for indoor sports which will demand exclusive gymnastic facilities,—bowling alleys, a swimming pool, a running track. To whom but to the architect would it occur that even the choice of the building site should be such as to permit of additions to the building of future excavation for a basement floor? Or that the back stage theater dimensions must be planned to conform to modern

situation under discussion, are admirably set forth in "Community Buildings for Industrial Towns" in the form of full floor plans for three buildings ranging in price from $45,000 to $275,000.

It goes without saying that the local situation demands of the architect as well as of the industrial heads or of the local building committee, a knowledge of the most modern developments in social buildings. It may be added, that it de-

"little theater" requirements, if the local dramatic group is to expand? Or that the kitchen must be so placed as to be easily accessible to large and small rooms for the service of hot food, if hospitality is not to be thwarted?

On the four following pages the first and second floor plans, as relating to the various schemes discussed, are reproduced and the notes of the architects also appended.




FIRST FLOOR PLAN

COMMUNITY BUILDING—SCHEME "B"

JALLADE, LINDSAY & WARREN, ARCHITECTS

SCHEME B requires a lot 136 by 136 feet. The auditorium and gymnasium are combined as in the former plan. In this case the room has a seating capacity of about 625 exclusive of the balcony, and a playing space 76 by 44 feet. There is a balcony on three sides increasing the seating capacity by about 225.

The building is so arranged that the auditorium may be used without opening the rest of the building, and vice versa. A retiring room for women adjoins the lobby of the auditorium, and a similar room for men is on the balcony floor. A checking room at the entrance to the auditorium is so located that it may also be used from the main lounge. A large general lounging room with fireplace is the central feature of the street floor. Adjoining it are the offices, women's room, game room, and reading and writing room. Folding doors between the game room and the reading room make possible a meeting room 33 by 20 feet. The secretary's desk is so located that he may have ready oversight over all parts of the ground floor.

This plan includes a swimming pool 60 by 20 feet reached only from the shower rooms in the basement. There is a spectators' gallery to the pool, reached from the main lounge.

The basement contains space for four bowling alleys, five billiard tables, and a large number of lockers, showers, and dressing rooms for both sexes. Entrance to the locker rooms and shower baths is controlled from the secretary's desk.



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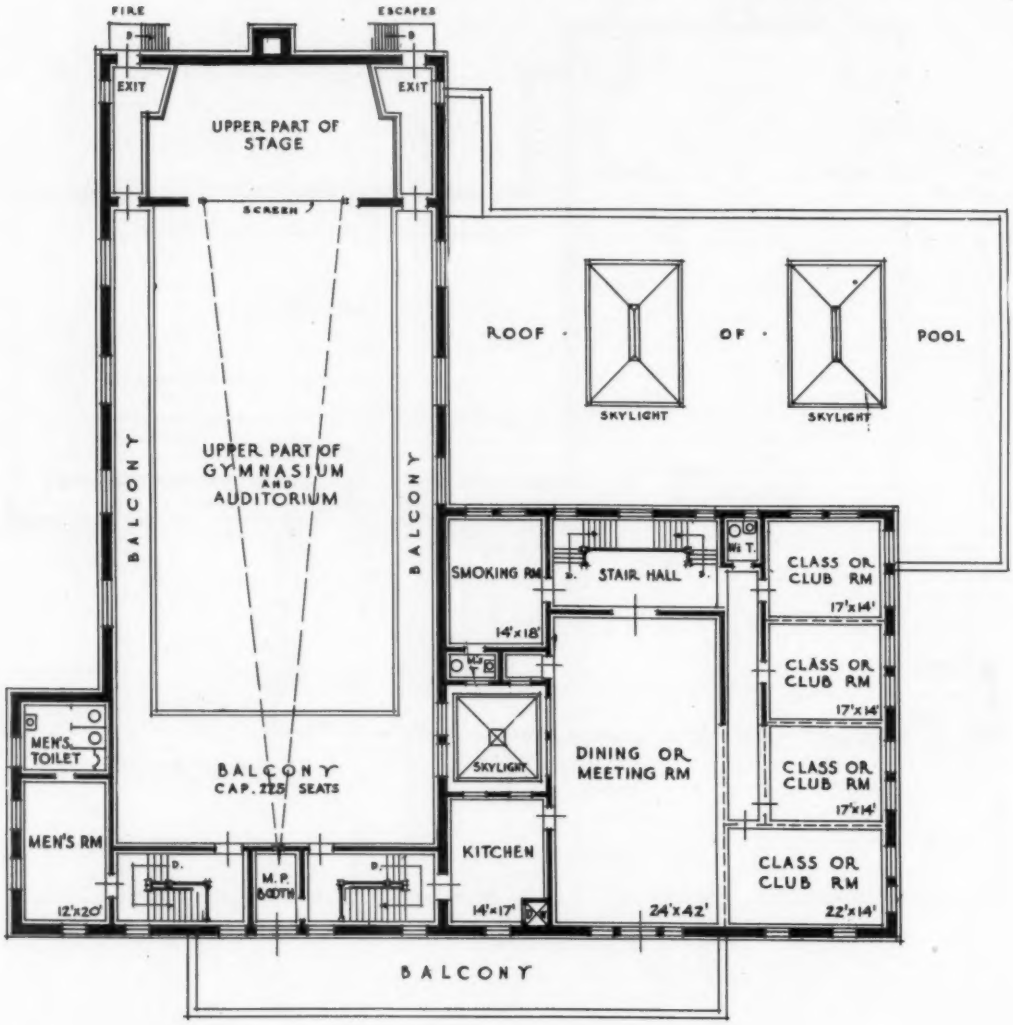


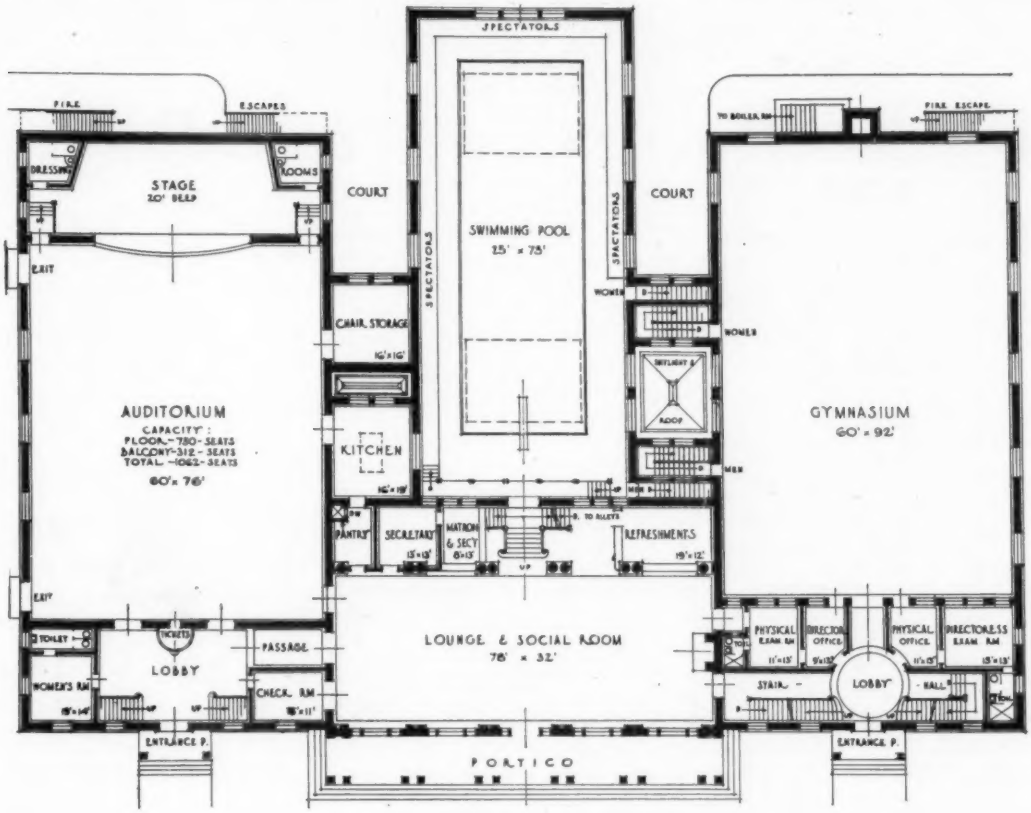

SECOND FLOOR PLAN

COMMUNITY BUILDING—SCHEME "B"

JALLADE, LINDSAY & WARREN, ARCHITECTS

THE second floor contains the men's smoking room, four class or club rooms, a kitchen and a dining or assembly room 24 by 42 feet. The capacity of the dining room may be increased fifty per cent by opening the folding doors of two of the club rooms. A dumbwaiter in the kitchen as planned would facilitate the serving of refreshments on the street floor. Built with masonry foundations, wood exterior frame above the first floor level, and wood construction throughout, it would cost about $125,000. With masonry foundations, brick exterior walls, wood floor joists and plain finish throughout, the cost would be about $135,000 to $140,000. If the exterior walls have a stone trim, and the first floor is of fireproof construction the cost would approximate $140,000 to $145,000. Fireproof construction throughout would cost about $158,000.

In addition to janitor service, this building would require the employment of at least one man and one woman on a full time basis so that there would always be one at the desk or nearby, while the other would have charge of the gymnasium and the swimming pool.




FIRST FLOOR PLAN

COMMUNITY BUILDING—SCHEME "C"

JALLADE, LINDSAY & WARREN, ARCHITECTS

THE industrial town with a population of 18,000 to 30,000 will find provision for meeting its leisure time needs adequately made in the building shown in Plan C. With masonry foundations, brick exterior walls, wood floor joists, and plain finish throughout, the cost would be about $235,000. If the exterior walls have a stone trim, and the first floor is of fireproof construction, the cost would approximate $245,000 to $250,000. Fireproof construction throughout would bring the cost to between $260,000 and $270,000.

This building requires a plot 204 by 160 feet. There are two stories and basement. The auditorium has a seating capacity of about 750 on the main floor and the balcony will seat 312. The stage is provided with a dressing room and a lavatory on each side. Ticket office, women's retiring room, and checking room adjoin the entrance lobby of the auditorium and a kitchen is so placed that it may serve either the auditorium or the other parts of the building. The auditorium may be entirely shut off.

On the opposite end of the building is the gymnasium, 60 by 92 feet, with a balcony on four sides which is suitable for a running track. The entrance to the gymnasium leads by the office of the physical director which is connected with the examining room and directors' lavatories. Across the lobby is the office for the women's physical director or swimming instructor, with examining rooms and lavatories.

Between the auditorium and the gymnasium at the front is the main lounge 32 by 78 feet, adjoined by the office, the kitchen, and the checking room. This lounge connects the entrance to the auditorium with the entrance to the gymnasium.



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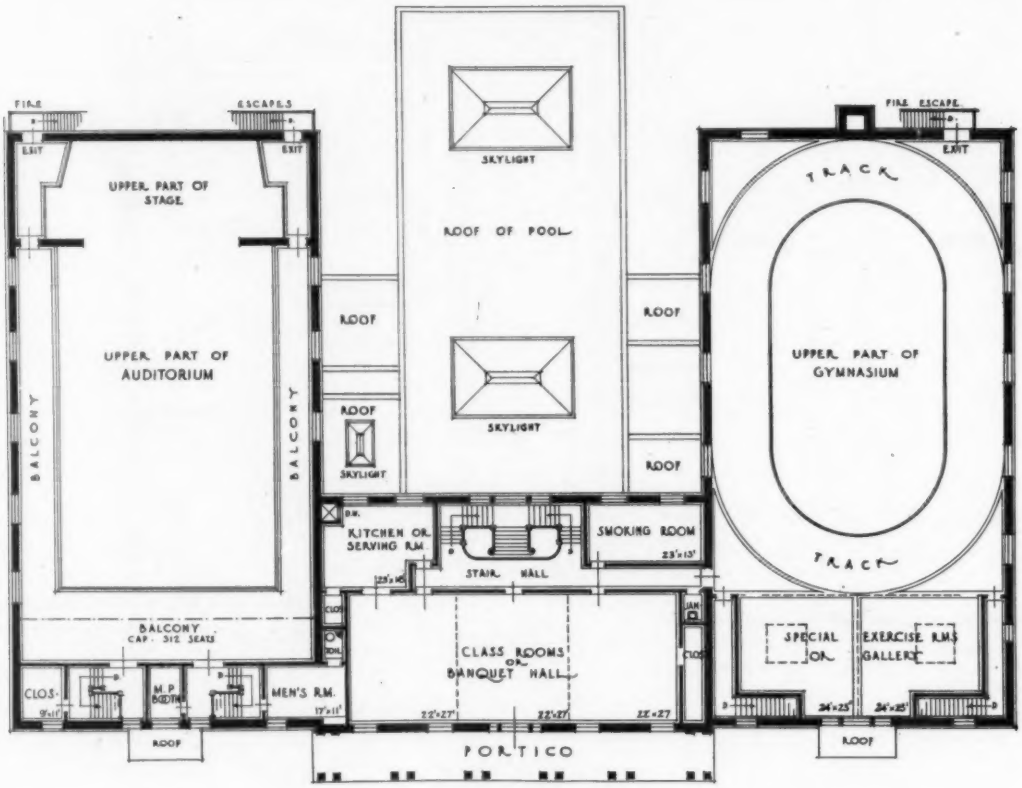


SECOND FLOOR PLAN

COMMUNITY BUILDING—SCHEME "C"

JALLADE, LINDSAY & WARREN, ARCHITECTS

A SWIMMING pool 25 by 75 feet is so placed that it may have a good supply of sunlight. Skylights may be used to advantage. Entrances to the pool are through the shower rooms only, insuring a complete check of everyone who reaches the floor of the pool. A spectators' gallery entirely separate is reached from the main lounge.

The basement provides lockers, showers, dressing rooms and service rooms. There are also six bowling alleys with well arranged seats for spectators, six billiard tables and adequate lavatories.

The second floor provides men's room for auditorium; auditorium balcony and motion picture booth; serving room connected by dumbwaiter with kitchen; smoking room, and two rooms which may be opened up for spectators when a race is being held on the running track. There is also a social or banquet hall 66 by 26 feet which may be divided by means of folding doors into three large club or class rooms.

# RETROSPECTIVE OF AN ARCHITECTURAL EDUCATION

BY MERRILL DENISON

AFTER having spent seven years of comparatively hard and certainly sincere work studying to be an architect it is disconcerting to discover that an expensive and elaborate system of education has not only failed to fit one for its avowed purpose but has actually given one certain viewpoints and a romantic incapability which is an actual detriment to a successful prosecution of architecture, as has been the experience of the writer of this article.

Most embryonic architects are brought face to face with the same conclusion shortly after they enter an office following graduation. Simply because most of them accept the situation without militant comment seems to the writer to be a very poor reason for perpetuating a system of technical training which has such a number of inherent defects. He feels that his seven years of study at least has earned him the right to criticize if it has taught him virtually nothing concerning the subject he was supposed to be studying.

On considering the viewpoints of those who practice architecture and those who teach it one finds an amazing anomaly. The first is a realist; the latter a romanticist. To the practicing architect a brick is one of the elements which enter into the erection of a building; in the minds of those teaching the subject and hence to the student there is no such thing as a brick. A brick as a single entity finds no existence in the school but in the plural it becomes a symbolic pattern of closely drawn lines, usually covered with a pinkish wash.

While this symbolism of the drafting board serves a cleancut purpose to the realist who is designing a building, to the romanticist who is completing a projet, it soon ceases to be a symbol or a diagrammatic expression intended to serve certain ends but gradually becomes the end in itself.

In practice architecture is an art which is concerned with realities, with bricks and stone, cement and steel, with wood and iron and which must serve the functional and material needs of the community. In the schools it is concerned with the symbols of these things alone and no continuous effort is ever made to drive home the fact that they are only symbols.

Architecture is a three dimensional art and would seem to demand for its successful prosecution a mind and imagination used to functioning in terms of three dimensions but at no time during his career does the student of architecture ever need to consider that his art has more than two dimensions. As an art it deals more completely with realities than any other and yet one might assume from an examination of the theory and practice of its training that it was concerned with nothing more than highly conventionalized patterns of lines.

As far as the necessities of the school are concerned architecture is confined to the limits of the drafting board. Where the student's mind should conceive his problem in terms of its mass standing in silhouette against the sky it works in terms of drawn lines placed against a chic rendering in which the accidental sedimentation of water-color may turn out to be, as it quite often does, the most important single factor in determining the worth of the drawing.

Where his imagination should carry him into the erected building and follow the lives of those who will use it to give him a knowledge of their aesthetic and practical needs it is generally concerned with the problem of adding unessential and trivial lines to the drawing before him which has lost its significance as a representation and has become its own *raison d'etre*.

The routine of the schools, of which there were four to which the writer went, was of such a nature that it not only did not serve the idea that a building has form and entity and has its being on the ground and in the air, but it completely distorted the whole process of realistic imagination in order to further the needs of the projet and the competitive method of judging it.

Even if the student realizes the three dimensional facts in architecture he is in no position to exploit that knowledge for his own development because of the need of accumulating credits toward his graduation and the natural demands his ambition makes on him that he be a successful competitor in the game he is playing. And "projeting," it seems to the writer, has become a kind of intricate sport. Whatever its original purposes might have been, and they were designed to serve a concrete end, the projet of today is an end in itself.

As the student becomes more proficient as a "projeter," his viewpoint becomes more artificial and trivial from a constructive standpoint until at graduation he is the master of the shadow of a great art and a relative infant as far as his ability to contribute to the art itself is concerned.

As with all romanticism a distortion has taken place in the minds of those engaged in the teaching of architecture so that the thing that is taught under that name is little better than an anaemic shadow and that, while in reality architecture has three dimensions, in the school it has but two . . . . length and very little breadth.



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It is true that the methods of studying the designs of a building and the work involved in completing a projet have certain points of similarity. Both require the use of pencil and paper but the approach to the two problems is so dissimilar that one finds hardly a point of contact on analysing the mood and method of procedure in tackling a projet and that of studying the necessities for a building to be erected.

In one case the drawing is an end in itself, in the other it is but a tentative step on the road. In one case the drawing will be treasured as a completed work of art and in the other will be regarded as something which has no real value in itself but whose worth must find its true fruition in the completed structure.

Both of these viewpoints are right as far as their relative intentions are concerned. This should not be the case with the student but as a matter of fact it is. To him the projet is an end and a very definite one. He soon learns to regard it as the most important single factor with which he has to deal in his school life for he finds that all the other studies die of inattention when a projet is nearing completion.

The projet is a thing in itself as well as its own end and it has relatively little to do with design as it is found in the office. For one thing, the slightest hint of economic fact or limitation is never allowed to intrude itself into the teaching.

There is something quite beautiful in this desire to shield the student from the cold, sordid facts of life as they touch the architect and to allow him to dream and draw in a well protected ivory tower of the magnificence and splendor of pure art but as one who dreamt and then awoke with a pretty severe shock, the writer would have preferred reality . . . or a little of it.

It is true that the architectural school does provide a better aesthetic training than any other course open to a young man or woman desiring a broad, general education—one that is infinitely superior to and much less vitiating than a liberal arts course. Even the hectic necessities of the charette have the value of developing in a person the ability to approach any situation with directness and simplicity and solve it with vigor.

But what, exactly, is the function of the architectural school? If it is to impart a broad and sympathetic culture, then a great deal of time and energy is unnecessarily wasted in developing a strange and exotic type of draftsmanship which really furthers no ends but its own. If the projet, as it exists today, must be retained it should be accepted for what it is and its involved technique and rules given a simple codification so that the student, early in his career, might become initiated in its tricks and short cuts, so that he might embrace more completely the broad and sympathetic culture he is seeking and which the school offers.

The writer would suggest, as the first step in reforming the school so that it better fits the cultural assumption, that some master technician in the art of "projeting" should bring out a book or guide after the manner of the sporting manuals in which he would clearly set forth the purposes of the projet, its conventions and the rules regarding it, both national and international. It would probably find a ready translation into French.

Such a book would frankly admit the two dimensional facts concerning the drafting board and would place in the student's hands certain invaluable hints to shorten his labors. There would be a chapter, for instance, on all those devices like the photo-stat process and rubbing half a drawing across where a building is symmetrical about its axis, so that the student would acquire the essential facts directly and not accidently as he does at present.

A special consideration should be shown to the form of short hand known as indication in which the Corinthian cap, for example, becomes a simple quick gesture involving two and up and down lines, a couple of rapid twirligigs at the corners and a slash of the pencil in the middle.

Trees and their uses would fill a considerable part of the work. For school purposes there are three trees which are the most important architectural elements known. Think for a moment what architecture in the schools might degenerate into if the poplar, with or without holes, were declared illegal or if that amazing tree were done away with which has the versatility of a stock actor and which looks something like a poplar but can work double as a fountain by simply bending its top a little.

Consider where the "Ecole" would be today were it not for that strange blobby growth that appears in front of those portions of a building which are distinguished by their badness or by the fact that they are not there. The blobby tree has probably done more to make the world safe for architectural hypocrisy than any other single thing.

Skies and the various methods of getting them on paper would have an important place because they will often make or mar a projet. It has always seemed a delicious farce to the writer, that solemn study and worry with which all architects in or out of the schools, approach the sky. He recalls working on a great competition once. The building was designed and drawn carefully on sheets of Whatman. All the facts necessary to a visualization of the completed structure were put down in black and white and then a professional renderer was called in. He put eighty-six consecutive washes on the sky with an air brush. It took three days to design the building and five days to design the sky.

The foregoing reformist views have been based on the assumption that the primary purpose of the

architectural school is to provide a general education and are designed to free the student by providing him with information which he seldom acquires now before his senior years and so free him, in part, from those labors which distort the true purposes for which he goes to the school.

If, however, the architectural school, in addition to the aesthetic side, is to equip a man with the ability and knowledge to be of actual service in the professional field without first going through a long period of painful readjustment, then the importance of the paper side of architecture is even more malicious and a radical and revolutionary change must be brought about.

This change must be accomplished by one of the three factors involved. The student, the faculty of the school, or the practicing architect. The student may be eliminated. He is more or less under the mature dominance of the other two, he is certainly not responsible for the present condition of affairs and has little chance of learning how bad they are while he is still a student.

It is first essential for the faculty to realize that their viewpoint is the romantic one which, while it might have an abstract justification, is immoral as long as it demands, for its complete flowering, the sacrifice of a portion of four years of effort from every student who comes within its scope. The faculty must see clearly that they have been turning out drawers of drawings and not builders and designers of buildings.

Where architecture is concerned with bricks, they have been concerned with paper and pencil and water color. Not once in the writer's entire school career can he remember suggesting that a building might have an actual corner to it. It only had sides (as a rule, only one) a plan and a section, all unrelated to each other—especially the section.

The practicing architects must lend themselves, their experience, their sense of reality to the faculties. They must open their offices to the needs of education and bring into the schools a cold, sane knowledge of what architecture is all about.

Both must accept with brutal frankness and as few protective apologies as possible the fact that a further continuation of the present unsatisfactory mode and philosophy of architectural education is criminally unfair to the rising generations of students as it has been unfair to those that have passed.

The writer realizes that he has touched on but a few points in a highly complicated subject and that his desertion of architecture because he had too great a respect for the most magnificent of all arts to foist upon it another incompetent, may be used as an excuse to lessen the essential honesty of his criticism. He knows, however, that present conditions are wrong, that they need correction and that the first thing to do towards a betterment of present conditions is to liquidate the error which exists today in teaching that architecture, a thing of entity, function and form, is nothing but an involved pattern of black lines on white paper sentimentalized by a few daubs of water color.

Silk Batik Overmantel, Jean Paul Slusser, Painter
From the recent exhibition of The Architectural League of New York



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# DEPARTMENT OF SPECIFICATIONS

CONCRETE SPECIFICATIONS—(*Continued*)

THE subject discussed in the last article in this Department had to do with the specifications for concrete up to the erection of forms.

It might be well to call the attention of the reader to the Joint Committee Report on specifications for concrete which was published last year. At the outset it must be remembered that specifications given in this report are tentative only and so far as is known these specifications have not received the approval of the constituent members of the Joint Committee. Anyone writing specifications should have a copy of this report and should study it very carefully as it no doubt will have a very great deal to do with the correct and adequate preparation of specifications in the future. Members of The American Specification Institute have received a copy of the specifications prepared by that body which are based on the Joint Committee Report and it would be of benefit to readers of these columns to familiarize themselves with these specifications. Inasmuch as the Joint Committee Report covers all phases of concrete structural work and a great deal of plain concrete work such as foundation walls and floors, it might be discouraging to the specification writer to attempt to write a totally new specification based on the tentative specifications in the Joint Committee Report.

With this thought in mind, and the further thought that suggestions given now may be of value for operations that are to be gotten under way in the immediate future, the points presented in this article that merit the consideration of the specification writer should be accepted as being subject to whatever revision might later on be necessary because of any revolutionary method of procedure based on the final report of the Joint Committee. There are many operations of small magnitude that could not readily be put under the Joint Committee's specifications without a very thorough education of the architect, the specification writer, the contractor, and the various material men concerned with the fabrication of concrete. It is not to be supposed that one should be satisfied to go along with specifications that might be inadequate while waiting for some final determination by the Joint Committee. If it is possible for the specification writer to improve his specifications to some extent at the present time, he should do so.

While the forms for concrete are being erected it is very possible that the erection of steel must be done simultaneously in order that the form work may be built around it. In this case the steel may be supported on structural steel columns or it may be intended that they be supported by and built into reinforced concrete columns. If structural steel is to be erected by the contractor for the structural concrete work, the specifications for forms should be followed by specifications for the erection of structural steel. The subject will be gone into more fully in a later paper so nothing more will be said of this work at this time.

Upon the completion of form work all interior spaces or forms should be cleaned of all rubbish and should be prepared to receive the reinforcing. It might be well to state here (although this has more to do with actual supervision of construction work than the writing of specifications) that forms enclosing spaces which are to be filled with concrete should be so built that the cleaning out of high spaces of narrow width may be accomplished from the outside and at the base of the form. If such arrangements are made the specification writer may have greater assurance that the forms will be cleaned out than if no such provision for facility in cleaning has been made.

When the forms have been cleaned out they must be inspected, although actually this inspection will be made from time to time as the sections are completed and made ready to receive the concrete. However, the sequence of operations calls for a specification covering the inspection of forms at this place. This inspection should cover the location of all forms of suspension for pipes, suspended ceiling, furring, or other items that require hanging devices to be placed on the concrete. It will also cover the location of insects, sleeves, thimbles or any one of the numerous other items that must be built into the concrete. Inspection must also include the actual dimensions of the forms and whether corners that are liable to be broken upon removal of forms have been provided with triangular strips to form bevels. If any of the items that are to be built into concrete require precise placing, the specifications must call for supervision of this work by the contractor supplying the items or supplying the work which will be connected to or suspended from the things built into the concrete. In cross-index fashion, a memorandum at the same time must be made in the specifications for piping trades, for furring and lathing, and miscellaneous iron or other trades, that such things must be furnished to the concrete mason or must be placed on or within the forms by the contractor furnishing them before the concrete is placed. As a general rule, the hangers, inserts and similar items are manufactured so that the removal of forms will not be retarded or made difficult by the nature of the piece set in the concrete. It will be well, however, to check back against the selected devices to make sure that this

condition obtains or that the specification for forms indicates that certain difficulties or certain preparations must be taken care of at the time the forms are built.

FOLLOWING the paragraph covering inspection of forms, the next series of paragraphs should cover the placing of reinforcing. It is to be understood that reinforcing may be bought in either one or two ways—first, delivered on the job with all straight bars cut to length and all bent bars cut and bent to proper shape, or second, that bars are all delivered straight with bending to be done on the job. In speaking of bars it may be considered that many reinforcing materials that are used in numerous places will be delivered under either one of the above methods. The choice of method, of course, will be determined by the local customs, although it is doubtful whether very much bending of bars is now being done on architectural construction work. If the reinforcing material is being furnished by another contractor (as is often the case under the separate contract system) the concrete specification must be specific in this connection, so that the contractor will not be forced to combat a demand that he bend bars that he would rightfully assume would be received bent if the specification only said that he was to receive and install all the reinforcing material shown on the drawings that would be furnished by another contractor. If any bending is to be done on the job such work must be specified in particular so that no difficulty will occur.

Regardless of whether the contractor for concrete work, or in the case of the separate contract system, the contractor for reinforcing steel, is to furnish the material, one or the other of them should be required to furnish the media for the support and spacing and proper holding in place of all the reinforcing material. The specifications must require that such items be furnished by someone and so placed that the position of the reinforcing will not be altered from that shown on the drawings. This matter of support and separation or spacing of reinforcing is quite important, especially with respect to bars, and the specification must be quite clear as to the demands of the specification writer in this respect.

In some cases certain types of devices manufactured to supply these things may be objectionable because some portions of them will be visible after the forms are removed. The specification writer should be familiar with the different types of these accessories that will be available in his district so that he will be prepared to rule out any devices that for one reason or another would not be acceptable. If no exceptions are made in the interpretation of specifications, the interpreter should not be expected to reject any accessories that have, to say the least, a negative approval.

If the reinforcing steel is to be furnished by another contractor and is to be received by the contractor for concrete work on the job, these specifications should require that each shipment of reinforcing material be checked against shipping invoices and placed in racks or otherwise disposed of so as not to be in the way or in such a position that other material would be piled upon it. There also should be provision that the superintendent will check quantities and shapes for bent bars, together with lengths of straight bars in order that discrepancies might be discovered in plenty of time to permit the substitution of correct material.

All of the reinforcing material should be placed in the forms after the forms have been cleaned out and inspected and in many cases after items that are to be built in, have been placed in final position. The reinforcing should be placed in strict conformity with the indications of the drawings and the various accessories such as spacers and supports be placed so that distances in all cases will be correct.

At times it is necessary to form bar splices on the job. The splices should be made only in the structural members of minor importance and should not be made without the consent or without the instructions of the person who designed the reinforcing work.

Regardless of whether or not the drawings for concrete reinforcement show the distances of the bars from the edges of concrete, the specifications should require that certain minimum distances be kept, more on the basis of fireproofing requirements rather than of design requirements, with respect to the distance of the reinforcing from the compression side of beams or slabs or otherwise. The writer is reminded at this point of one specification he saw not very long ago which required that all rods must rest on the forms. Needless to say, the building had not been completed before it collapsed. Just as a safeguard, it would be well to include in the specifications a clause for reinforcing of various types such as for beams, girders, columns, and slabs be placed a certain minimum distance from the forms, this distance not to be increased unless the drawings so indicate.

Upon completion of the placing of the reinforcing material, each section should be inspected and then released for the placing of concrete. A clause covering this requirement should appear in the specification in order that some control of the time of commencing the pouring of concrete may be had, otherwise incorrectly placed reinforcing might be covered up before the inaccuracies are discovered.

In warm weather it is necessary to wet the forms immediately before the placing of concrete. This wetting of forms not only helps to prevent the rapid absorption of water from the concrete but it also does very well as a cleaner of the forms if provision has been made to remove the debris from



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the bottom of the forms. The specifications should require that the forms be drenched in warm weather but not, of course, in freezing weather. To some extent the details of this work must be left to the discretion of the construction superintendent.

If steel structural members are present and are to be fireproofed with concrete, it is possible that they must be wrapped with caging of some type such as wire mesh or any patented flange or web caging in order to hold the concrete fireproofing around the beam in an adequate manner. This material ordinarily is furnished by the contractor for the concrete structural work but in the interests of accuracy it is best not only to have these things shown on the drawings, but to specify them for all such cases.

WE will suppose that the building being built in our mind's eye now has the forms all ready to receive the concrete with reinforcing and various accessories that are to be built into the concrete properly positioned, the forms drenched (if in hot weather) and all other items taken care of in a correct manner. Next in sequence comes a series of paragraphs relating to the proportioning, mixing and placing of concrete, and care of newly deposited concrete. The first step in sequence is that of the proportioning of concrete.

The first item to be determined in the specifications for concrete proportioning is the unit of measure and because of the convenience to be had, the usual unit of measure is based on the package of cement, whether it be a paper bag of one-quarter barrel, or whether it be a full barrel. In any case the unit of measure must be fixed not only for each material, but for the condition of each material—that is to say, the cement should be measured as delivered on the job in its packed condition, while the fine and coarse aggregate should be measured as placed in the measuring box. The usual rules of proportioning are supposedly based on the measuring of materials as just suggested. The use of cement shipped in bulk has become popular for some purposes in the past few years and the specification writer might find it well to cover the matter of measuring bulk cement according to the local customs for operations of varying magnitude.

Common usage has decreed that concrete that is to be reinforced should be mixed in the proportion of one part cement to two parts fine aggregate to four parts coarse aggregate when the various constituent materials are of average good quality. A study of the Joint Committee Report will reveal the fallacies inherent in blind adherence to this common understanding. Much can be said against the proportioning of concrete in this manner but on the other hand it cannot be said that architects and contractors are now ready to make universal use of the extremely fine methods of proportioning that are presented in the Joint Committee Report. This is not to be understood to be in criticism of the excellent methods of proportioning presented for consideration in this report, but it is simply calling the attention of readers to the fact that unless they are thoroughly familiar with the methods outlined in this report, they should follow closely the rules or proportion that through their practice seem to have produced concrete of good quality. The proportions for reinforced concrete and for plain concrete for various uses all should be specified and not left to the determination of the contractor or of the architect's superintendent on the job.

If hydrated lime or any integral mix is to be put in the concrete its quantity in proportion to the cement should be specified at this time. The quantities selected should be chosen in accordance with accepted practices as determined either by the manufacturers of the materials used or through tests conducted by responsible research laboratories.

The water to be used in the mixing of concrete should be specified to be clean water—that is, potable. Local conditions may require that the specifications covering water be gone into more throughly but ordinarily clean, potable water is generally accepted as being of sufficiently good quality for concrete. If the word "clean" is used, it is rather nonsensical to say that water shall be free from dirt or other foreign matter, and if it is potable it must be assumed that there is not a great amount of alkali in it.

Next in sequence should come the mixing of the concrete. All concrete should be mixed by a machine except where the operation is very small, in which case hand mixing would be resorted to. It is extremely improbable, however, that an operation so small that a machine mixer would not be used would be the subject of specifications. It is supposed, and by far the best practice requires, that all concrete will be mixed by machine.

Professor Duff A. Abrams, of the Structural Materials Research Laboratories of Chicago, has made very exhaustive tests on the proportioning and mixing of concrete and has determined that if concrete is mixed for about one minute, the quality ordinarily is about as good as could be expected. Some specifications have been somewhat strict in the matter of the number of revolutions of the drum. Professor Abrams' investigations indicate that if the drum revolves from twelve to about twenty-four times per minute there is not very much variation between concrete mixed at the low rate and that mixed at the high rate. Below the minimum and above the maximum revolutions there is a variation that gradually becomes greater and more fraught with danger in the case of minimum revolutions or more useless expenditure of mechanical energy with respect to the maximum

*(Concluded on page 332)*

# DEPARTMENT OF ARCHITECTURAL ENGINEERING

## INTERESTING STRUCTURAL DETAILS

### Examples of articulation between reinforced concrete and structural steel in recent structures

BY ELWYN E. SEELYE*

THE use of reinforced concrete combined with structural steel rather than constructing buildings entirely of one material or the other is becoming a common practice. This combination of the two materials offers interesting problems in connection with the articulation of structural steel with reinforced concrete.

Where reinforced concrete girders rest on structural steel columns it is necessary to provide more bearing area than is required for the seats of structural steel beams, because the concrete is so much weaker in compression than steel.

The building out of these seats to provide ample bearing area would require that they possess considerable bending strength on account of the distance of the center of gravity of the bearing from the face of the columns. This in turn would require rather expensive details and brackets, or gussets, would be apt to cut into the architectural clearances. For this reason the writer has adopted a detail of multiple seats as illustrated in Figure 1.

It is often advisable to carry up a structural steel column for a certain distance and then to start in with a reinforced concrete column. Here again it is necessary to spread the top of the steel column in order to provide sufficient bearing area for the concrete column. This may be solved by the use of a billet designed for bearing, bending and shear, which design will not interfere with architectural clearances. This is illustrated in Figure 2.

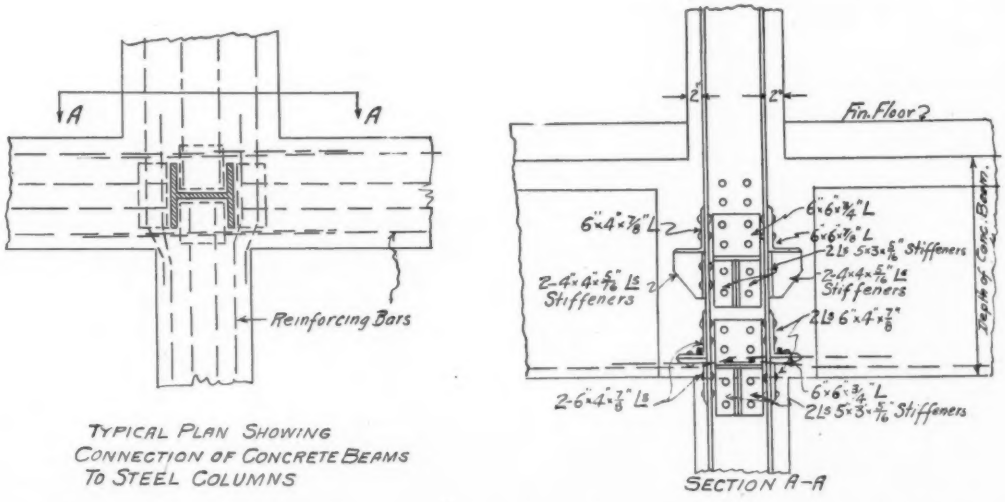


Fig. 1—Detail showing multiple seats used for reinforced concrete beam supported on steel column. University of Buffalo, Chemistry Building. McKim, Mead & White, Architects; Elwyn E. Seelye, Engineer

Another use of reinforced concrete is for the strengthening and articulation of additional story steel, as for example where a building is to be increased in height.

The addition of structural steel plates to an existing column presents a rather expensive problem

*Consulting Engineer, New York City.

not only on account of the necessity for cutting old rivets and drilling new holes in the old steel, but also because it is difficult to carry this reinforcement past the connections of an existing tier of beams. For this reason it will often be found more economical to surround the existing structural steel with a reinforced concrete column and either figure the column without reduction for long

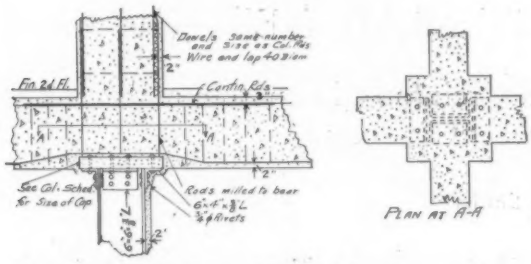
Dowels same number and size as Col. Bars
Wire and lap 40 diam
Fin. 2d Fl.
Cont'n. Bds.
See Col. Sched. for Size of Cap
Rods milled to bear
Cap 2'
PLAN AT A-A

Fig. 2—Top of steel column and foot of reinforced concrete column. Combustion Engineering Office Building, New York City, Ludlow & Peabody, Architects; Elwyn E. Seelye, Engineer

column action or to figure the column as a reinforced concrete member, the existing structural steel forming part of the vertical reinforcement.

The connection for an additional story column on top of an old steel column is an expensive and difficult problem if the joint is made directly between the old and new steel. This is because of the field work required to make the splice and also the accuracy in measurements required in order to have the new steel fit properly.

These difficulties may be circumvented by the use of a reinforced concrete cap upon which the new column may be set with anchor bolts in a similar manner to that used in setting new columns on a concrete foundation. This is illustrated in Figure 3.

The connection for a concrete beam resting on a steel girder provides no particular difficulty except that anchor rods should be provided to hold the concrete beam firmly to its flange bearing. This should also be done in the case of stone concrete slabs resting upon a steel beam, unsupported laterally, as might be the case of a steel facia girder of a balcony.

Less usual cases of articulation are those where

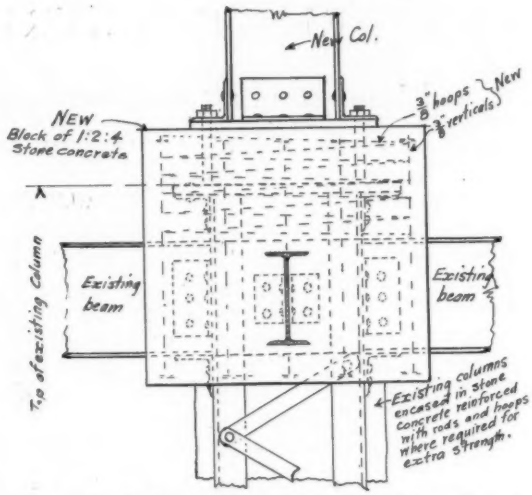


Fig. 3—Detail of connection for extension of existing columns for additional Floors, 15 Exchange Place, Jersey City. W. L. Stoddart, Architect; Elwyn E. Seelye, Engineer

a steel beam frames into a reinforced concrete column or girder. The only caution required here is to see that the concrete entirely fills the space between the flanges of the steel beam so that direct compression stress in the case of a column and the compression and shearing stress in the case of the girder, are transferred by bearing through the web and flanges of the steel beam.

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# ELECTRICITY IN THE HOUSE

## IV — THE KITCHEN

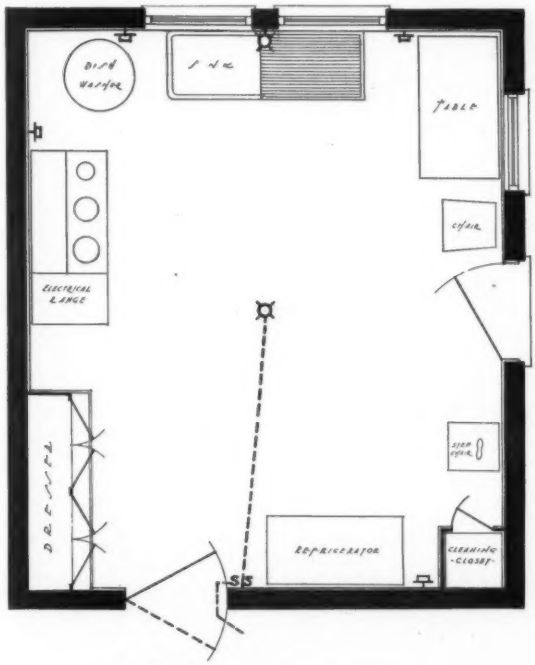
BY M. O. WHITTON

FROM a modern woman's standpoint, it is almost impossible to over-emphasize the importance of having a well planned, well equipped kitchen. As long as the serving of three meals per day remains a household necessity, just so long will women rate the success of a house plan by the ability of the kitchen suggested to fulfill that household's standards of hospitality.

Curiously enough, the original kitchen planners in this country, apparently were not women, but the architects responsible for the laying out of kitchens in hotels, restaurants and large private establishments, where speed and ease in serving are prime requisites. Kitchen planning for the ordinary private home developed as kitchen employees departed, and next we hear of state agricultural schools trying to improve the kitchens of farmers'

wives, with a view to lessening the amount of work falling on the shoulders of the rural housewife. Finally, as the domestic service shortage began to affect homes formerly considered comfortable, a perfect fever of scientific kitchen planning spread through all the household magazines, and prizes were offered, here, there and everywhere, for the development of model kitchens,—food laboratories, one is almost inclined to call them, especially when electrically equipped.

Through all the differing details of this multitude of model kitchens projected on paper, certain general ideas prevail, first, ample provisions of light and air; then, elimination of waste motion, and finally a most modern conception, proper mechanical equipment to eliminate drudgery and unnecessary hard work. In all of these three elements, electricity plays a prominent part; thus it becomes apparent, that in designing a good modern kitchen, its adequate electric wiring must receive most careful attention.




Ceiling Outlet  Bracket Outlet
Base Receptacle  S Switch

A Kitchen wired to meet modern demands becomes a food laboratory

Merely to enumerate some of the electric kitchen utensils now available will give some idea of the sort of thing that has to be borne in mind in laying out the wiring of a present day kitchen. To aid in the preparation of meals on a large scale, there are electric grinders for meat, coffee, bread crumbs and the like; there are vegetable parers, ice cream freezers, bread mixers, and cutters, etc.; while for more ordinary home use, there would be a utility motor, or "kitchen aid" or some similar power device, which can be adapted to do most of the things for which hotels and restaurants need separate machines. For cooking, there is the possible use of the electric, the gas-electric, or the coal-electric range; there is the electric fireless cooker, and the host of smaller aids, such as the waffle iron, toasters, and coffee percolators. Nor should the possibility of making frozen deserts in the ice compartment of the electric refrigerator be overlooked. For post-prandial activities, there are several types of dish washers to choose from, such as the combination table-and-washer, the combination service-table-and-wagon, and the washer with a permanent plumbing connection. The considerations which govern the selection of kitchen equipment are logically those of the amount of space available, the size of family to be served, and the general scale of living to be provided for. It is not necessary, however, for the architect to concern himself with the details of such machines, as long as he considers their possible use when he designs the wiring for a kitchen.

In selecting a plan to illustrate an adequate wiring scheme, no effort has been made to portray the culinary department of a large mansion or small hotel, but rather to proceed upon the less imposing basis of the kind of kitchen one is likely to find in the moderate sized home of the better type. The size chosen, 12 by 14 feet, is in accord with present day space economies, yet is entirely ample for the daily requirements of a family of five or six. Given a kitchen of this size, well equipped with kitchen appliances, it becomes capable of serving many more, especially the occasional formal dinner to a few friends.

The room shown is well provided with daylight, the north side being now usually preferred by architects for a kitchen location. As, however, practical considerations require the use of the kitchen beyond daylight hours, adequate artificial illumination must also be furnished. For general lighting in a room of this size and nature, one fairly large unit located against the ceiling (unless it be an extraordinarily high one) will supply a very satisfactory working light, free from shadows. A well painted, and well washed white ceiling will do much to improve the efficiency of the fixture selected, while one large bulb of the high-efficiency type will be found economical in operation.

This central fixture will supply all the general lighting needed for kitchen work, with one exception, and that is for dish washing. In the view of the average housekeeper, it is impossible, for obvious reasons, to have too much light on the



XUM

subject of plate cleaning. The sink, therefore, is placed under the windows, and is accorded a special lighting bracket as well. In this kitchen, one drain board, to the right of the sink, is shown, the place of the second drain board being taken by an electric dish washing machine to stand at the left of the sink, and to be operated from the receptacle, shown at the point. In the corner of the room is the kitchen table, well lighted from the windows on two sides. (In an apartment, rather than a suburban house, the side would probably not be available, and any possible deficiency in lighting could be made up for by an additional lighting bracket placed in the window location shown here.) To the left of the table, another receptacle is indicated, designed for the operation at the table of such devices as the utility motor for grinding, polishing, bread and batter mixing, and the like, while in many cases, the kitchen table itself would be wired.

On the unbroken side wall is placed the range, which in cities where special cooking rates are available, will probably be electric on account of its great economies in cooking, cleanliness and fineness of regulation. Where an electric range is to be used, special wiring must be provided to carry the heavier current needed for the operation of the range. In passing, it may be said that the electric range, together with the heavier types of electric radiator, and possible electric heating for an ironing machine, are the only pieces of household equipment which cannot be operated on the ordinary lighting circuit. Smaller types of radiators, electric stoves, ovenettes, fireless cookers, combination stoves, etc., almost *ad infinitum*, require no special wiring beyond that ordinarily designed for a house,—assuming that too many of these devices are not operated at once.

Should it be desirable, kitchen odors can be carried off by placing a small electric fan above the range in connection with a flue. This fan would be supplied from the same receptacle that controls the stove. This ventilating provision is not usually required in a modern well aired kitchen, unless an enormous amount of cooking is being done in it for the size of the room. Usually, too, most housewives supply a fireless cooker in which the most odoriferous of our ordinary viands are reduced to inoffensive eatables. The remainder of this wall is taken up by the kitchen dresser, for which there are no special electric requirements.

To the right of the dresser is the door leading into the butler's pantry, and to the left of this door are the lighting switches controlling the fixtures in both that and the kitchen. Beyond the doorway is the refrigerator, hopefully an electric one, in which case, it will be operated from the receptacle shown next to it. The remainder of this wall is taken up by a cleaning closet, next to which, space is allotted for a step chair, and a small easy chair located next to the door of the porch or rear entry. (In an apartment kitchen this additional exit would be omitted, and the arrangement would be slightly shifted accordingly.) For work at the sink or kitchen table, a high stool is generally found more satisfactory than a chair because it is less bulky and is more easy to handle. It will be noticed that the entire center space is left free and unencumbered for swift movement.

In discussing receptacle facilities in this room, the term baseboard outlet has been purposely avoided, for many kitchens are wainscoted, tiled, or otherwise panelled up for several feet from the floor, in which case it will be found much better to locate the outlets in this elevated position, rather than in the baseboard itself. Not having to stoop to the floor to connect or disconnect makes for the ready use of electric appliances, and constitutes a saving of time and effort appreciated in a busy kitchen.

Finally, it will be noticed that no possible provision is made for laundry work in the kitchen. The writer knows not of one thing more conducive to household efficiency and peace, than the complete separation of laundry and kitchen work. If necessary, it is better to reduce the size of the kitchen, or arrange some space in the cellar, in fact to do almost anything else, rather than to have clothes washed in the same room in which three meals a day are to be prepared. Laundry work done by modern machinery, need no longer be an onerous task, and certainly, with a well planned kitchen at command, three meals a day cease to be a life sentence at hard labor. But the respective requirements of these two functions both in time and space are so widely divergent, that, with rare exceptions, they can only be successfully handled in separate quarters.

# ORIGINS OF FIRES AND CONFLAGRATIONS

THE Burlington Building in Chicago has a height of 15 stories with a frontage of 175 ft. on Clinton Street which is 80 ft. wide and 150 ft. on Jackson Boulevard which is 66 ft. wide. It is commonly spoken of as a fireproof building because the structural members are of metal protected with clay tile and concrete. It is used for office purposes and the large office areas with partitions constructed to interfere as little as possible with light and air made it possible for furnace-like temperatures to develop, once a fire might obtain good headway. The street fronts contain as much window area as it was possible to secure. The windows were of plain glass with wood sash and frames. The owners never dreamed of the possibility of flames attacking this building across wide streets, but on the side and rear wire glass set in metal frames was used on alley walls as a protection against exposure fires.

On the night of March 14-15 a fire started in an unsprinklered 2-story building on the southeast corner of Jackson Boulevard and Clinton Street. A light northeast wind prevailed and the fire spread rapidly southward to adjoining 7-story sprinklered buildings occupied by companies engaged in light manufacturing, printing, book binding and publishing. The intense heat opened all sprinkler heads and the tanks were soon empty. Then the flames shot across the 80-ft. street and gained access to the Burlington Building through the plain glass windows with wood sash and frames, at the level of the eighth floor. Half the contents of the building were destroyed. The building was not sprinklered and once the fire obtained a start it cleaned out the upper floors.

The day after the fire the elevators were running up to the fifth floor. On that day the bank offices on the first floor were prepared for occupancy as were five of the lower floors for officials of the road. Three days after the fire the sixth and seventh floors were ready for occupancy and on the fifth day after the fire the eighth floor was turned over to tenants. It is reported that most of the damage to the eighth and lower floors was caused by water and business was but slightly interrupted. Many valuable records were destroyed.

The building after all merits the claim of being to a high degree fire-resistive. A report is promised in the near future and the lessons such fires teach will be published for the benefit of architects and engineers. The exposure fire from which the Burlington Building suffered originated in non-fireproof buildings housing industries which were serious fire hazards. It is reported that the fire is believed to have been incendiary in origin.

In this connection a bulletin issued March 20, 1922, by the National Lumber Manufacturers' Association is interesting as it contains an analysis of the 1921 Report of the Committee on Statistics and Origin of Fires, of the National Board of Fire Underwriters. The bulletin may be had by all who are interested enough to ask for it. The summary on the last page is given here to show that carelessness and dishonesty keep pace with improvements in methods for obtaining a high degree of fire resistance in buildings. The lumbermen believe the annual fire loss will be greatly reduced when proper attention is given to control of hazardous occupancy and the carelessness of occupants.

SUMMARY OF REPORT

| Type of Building | Number of each type in cities | Number of fires in each type |
|---|---|---|
| Reinforced Concrete | 2589 | 163 |
| Fire Proof (Steel Frame) | 3421 | 92 |
| Brick and Stone | 283432 | 6877 |
| Iron-Clad | 2809 | 136 |
| F R A M E | 944494 | 15637 |
| Concrete Block | 5305 | 148 |
| Buildings not classified | 12112 | 336 |
| Total Buildings | 1254192 | |
| | Total Bldg. Fires | 23389 |
| | Other than Bldg. Fires | 11108 |
| | Total Fires | 34497 |

75.3% of all buildings were frame.

1.65 fires per 100 frame buildings.

2.43 fires per 100 brick and stone buildings.

2.50 fires per 100 of all buildings other than frame.

330 fires extended to the adjoining building only.

70 fires extended beyond the adjoining building.

1.1% of all fires extended to the adjoining building.

.2% or 1/5 of 1% of all fires extended beyond the adjoining building.

98.7% of all fires were confined to the building or place or origin.

Ratio of frame buildings to brick and stone buildings 3.33 to 1.

Ratio of frame buildings to all buildings other than frame 3.27 to 1.

Total loss to buildings and contents $23,707,411.

Loss caused by communicated fires 7.34 per cent. of total $1,741,108.

*NOTE—Communicated fires include some fires that did not originate in buildings.*

# PLUMBING AND DRAINAGE PLANS

## The New York Plumbing and Drainage Code Presented in Graphic Form

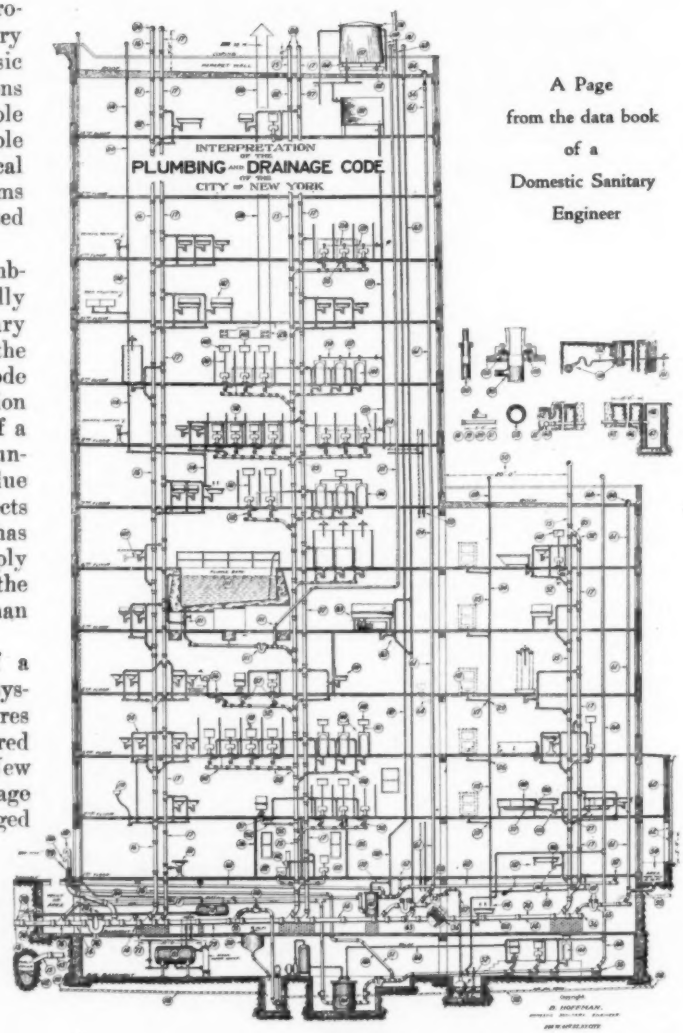
THE interpretation of all the provisions of building and sanitary codes requires a sound basic knowledge of the trades and vocations involved in addition to considerable practical experience. It is not possible always to avoid mistakes and practical men make considerable use of diagrams to shorten work and check designs based on the text of the codes.

Mr. B. Hoffman, a New York plumbing and heating contractor, who locally is well known as a domestic sanitary engineer, solved in his own practice the problem of quickly referring to code provisions by a pictorial representation which is hung on the wall in front of a designer when plumbing plans are under way. A number of requests for blue prints were received from architects who heard of the diagram and it has lately been printed in order to supply the demand. It is a useful key to the code and is of much greater service than an index.

Each connection and portion of a complete plumbing and drainage system is shown on the diagram, the figures in small circles referring to numbered paragraphs and sections in the New York City Plumbing and Drainage Code. The compiler has been engaged in plumbing work for many years and made a careful analysis of the sanitary laws of New York City where the greater part of his work was done, for the purpose of lessening errors in design and avoiding mistakes in construction.

The diagram is greatly appreciated by men who are using it, for it conveniently presents for reference a vast amount of necessary information which, without this aid, would require many hours to read and understand. It should be useful in cities having sanitary codes based on the one in force in New York City. It has a place also in schools of architecture as well as in classes for plumbers' apprentices. The diagram sold by Mr. Hoffman is three feet high by two feet wide with ring attached so it may be hung like a calendar.

The idea is worth copying by architects, sanitary engineers and plumbers in other cities. The work involved in the preparation of such a chart is, in itself, splendid training for designers.




A Page from the data book of a Domestic Sanitary Engineer

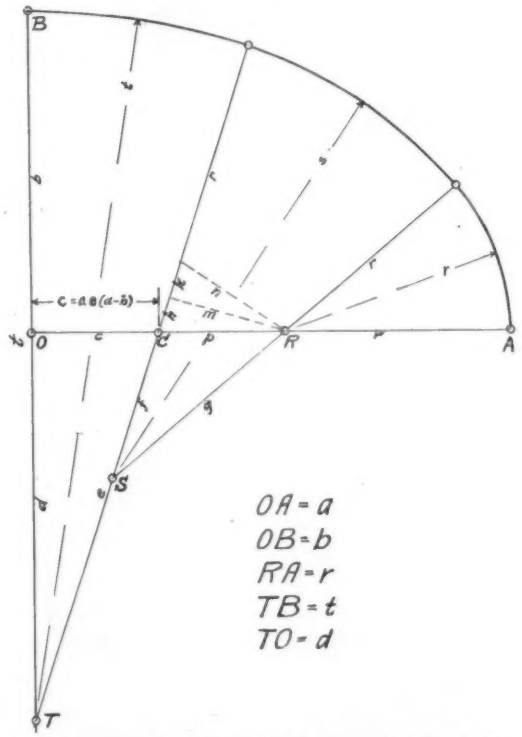
### Line Cuts from Blue Prints

NOT all architects and engineers know that to prepare drawings for engravers it is only necessary to go over the white lines on blue prints with black drawing ink. In photographing the drawing to make a zinc etching the blue is filtered out. Many of the drawings appearing in the pages of THE AMERICAN ARCHITECT and THE ARCHITECTURAL REVIEW are prepared in this manner. This knowledge may encourage more of our readers occasionally to send in details of construction, which may be inked in and reproduced without regard to other lines on the sheet containing the details.

## Laying Out an Approximate Ellipse

By David C. Coyle, C. E.*

AN ellipse of the usual proportions, i. e., with length not more than twice the width, may be imitated so closely with circular arcs that the eye cannot detect the difference. The advantage of the compound curve lies not only in greater ease of drafting, but in the simplification of all the computations relating to its dimensions. This latter factor may be an important one where a structure is built of elliptical form of steel or stone which will require detail shop drawings.




An approximate ellipse laid out by the method described

The usual rules for drawing such a curve give a resulting oval which is easily recognized as a false ellipse. This is due to the fact that the radii used are the maximum and minimum radii of curvature of the true ellipse. Their arcs touch the ellipse only at the ends of its minor and major axes and as the curve leaves this point of contact it becomes more and more widely separated from the true ellipse. The intermediate radius is obtained by guesswork.

The semi-major axis being $a$, the semi-minor axis being $b$, then the maximum radius of curvature is $\frac{a^2}{b}$, and the minimum radius is $\frac{b^2}{a}$. Instead of these values, the following may be used:

$$t = \frac{0.04\,b^2 + a^2}{1.04\,b} = \text{Maximum radius.}$$

$$r = \frac{0.04\,a^2 + b^2}{1.04\,a} \quad \text{Minimum radius.}$$

The resulting circle of radius $r$ goes through the points $x = 0.915a$, $y = \pm\ 0.41b$, as well as through the point of tangency $x = a$, $y = 0$. Similarly the circle of radius $t$, goes through $x = 0.41a$, $y = 0.915b$, all these being points on the true ellipse.

Theoretically it is now possible to compute an intermediate radius $s$, such that its arc will be tangent to the two other arcs and also will pass through one point on the ellipse. The computations however are more elaborate than the result warrants. One may obtain the same effect, so far as the eye can detect, by assuming the distance $c = 0.8\ (a—b)$.

The foregoing computations need be only approximate; a variation of two or three per cent will not visibly affect the resulting curve. The position of the point $S$ must be accurately located for it is fixed when the three points $R$, $T$ and $C$ are fixed.

For establishing the position of the point $S$ the following method avoids the use of trigonometry:

$$d^2 + c^2 = e^2;\quad m = \frac{dp}{e};\quad h = \frac{cn}{e}$$

$$k = t - e - r - h$$

$$g = \frac{n^2}{2k} = \frac{m^2 + k^2}{2k};\quad f = g - h - k$$

These lengths $f$ and $g$ having been accurately computed, all the necessary co-ordinates are easily found by proportion. The figures may be checked by making a careful layout of the curve, when the circular arcs should exactly meet.

*With Gunvald Aus Co., Consulting Engineers, New York City.*

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## A "Best Home" Contest

THE Cleveland Chapter of the American Institute of Architects will conduct a contest during the American Building Exposition in Cleveland, Ohio, to ascertain the appreciation of good residence architecture by the public.

Home owners have been invited to send in photographs of their residences. These will be enlarged to a standard size and each visitor at the exposition will be invited to cast his ballot for his choice of the three best. A committee of architects also will select three homes according to the standards of architects and the six owners, selected by public vote and the committee, will be awarded bronze medals designed by local art students.

The American Building Exposition will open on April 22 and close on May 2, 1922.



XUM

## Oil in House Heating Boilers

MR. CHARLES D. ALLEN, says *Domestic Engineering,* at a recent meeting of the Chicago section of the A. S. H. & V. E. gave the following data relating to the use of oil for house heating boilers.

Crude oils fall under two classifications, those with an asphaltum base and those with a paraffin base. After refining the latter the last product is paraffin, and after refining the former the last product is asphaltum. Oils with a paraffin base are not ordinarily used as fuel as they can be made into products of infinitely greater value, but crude oils that are of a predominating asphaltum base are generally used after the lighter products such as gasoline and kerosene have been removed.

A barrel of fuel oil contains 42 gals., weighs 310 to 336 pounds, occupies about 50 per cent less space than equal heat value of coal, and weighs 35 per cent less.

Generally speaking a gallon of oil weighs 7½ pounds, contains 144,000 B.t.u., and hence in heat value is equal to 12 pounds of coal having a heat value of 12,000 B.t.u.

Theoretically there is not much difference in the air per heat unit required for combustion, but by reason of the nature of gas burners, excess air for proper combustion may be reduced to as low a figure as 10 per cent, while for coal it is never less than 50 per cent, and may be as high as 100 per cent. Largely by reason of this 75 per cent thermal efficiency with oil burners is common, as against only 60 per cent with coal. On this basis 2,000 pounds of coal will give the same actual steaming capacity as 133½ gallons of oil.

Three general types of oil burners have been developed in which steam, air, or mechanical means are used for atomizing the oil. In power plants where high pressure steam is used, the first method is generally employed. In heating plants, with which we are mostly concerned, either mechanical means or compressed air are generally used.

Wm. T. Dean of Chicago, pointed out that the advantages of oil for fuel are its convenience, high heat value, low handling cost, cleanliness, lack of ashes, and limited storage space requirements.

Mr. Eaton of Chicago, stated that 90 per cent of the house-heating boilers sold in California use oil burners. He predicted that oil will eventually displace coal as a fuel and gave as his reasons, in addition to those mentioned by Mr. Dean, the economy in basement space, uniformity in temperature obtainable, and the utilization of boilers that are inefficient when burning coal. He also maintained that boilers burning oil can use smaller flues.

A. B. Frenier discussed oil burners as a new service rather than as an introduction of economy, and dwelt on the great difference in the problems of burning oil in industrial plants as compared with those that had to be overcome in developing oil burners for house-heating boilers. He stated that at the present time it was more a matter of developing boilers that will absorb the heat generated by the oil burners than a case of improving the burners themselves. He agreed with others that boilers with long tortuous flue travel are the best adapted for the burning of oil.

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## Construction Costs in Ontario

UNDER date of Feb. 7, Consul G. R. Taggart, London, Ontario, reported to the U. S. Department of Commerce, as follows:

The following tables, showing costs of labor and of building materials in Toronto, were obtained from contractors and from leading Canadian publications dealing with construction work:

*Ontario wages per hour for construction work.*

| Year | Bricklayers | Carpenters | Electricians | Painters | Plumbers | Builders |
|---|---|---|---|---|---|---|
| 1913 .... | $0.62 | $0.43 | $0.42½ | $0.41 | $0.47 | $0.31 |
| 1917 .... | .66 | .49 | .49½ | .44 | .51½ | .34½ |
| 1920 .... | .92 | .71 | .72 | .66 | .74 | .50 |
| 1921 .... | .89½ | .70 | .71½ | .65½ | .71½ | .47 |

Values in the above table have been converted to United States currency at the following average rates: December, 1921, $0.929; for the year 1921, $0.895; for 1920, $0.8929; earlier years at par.

New construction in Toronto is held up, pending further deflation in the costs quoted below:

*Comparative wholesale prices of building materials in Ontario.*

| Article | Average, 1914 | Peak, 1920 | December, 1921 |
|---|---|---|---|
| Structural steel ..... 100 pounds.. | $2.50 | $5.80 | $3.02 |
| Cement ..... 300-pound barrel.. | 1.95 | 3.75 | 3.44 |
| Lumber ..... 1,000 board feet.. | 22.00 | 49.11 | 33.44 |
| Bathtubs, enameled iron .... each.. | 15.00 | 38.99 | 34.37 |
| Brick, common ..... 1,000.. | 15.00 | 16.07 | 15.79 |
| Fiber, tarred ..... 25-pound roll.. | .65 | 1.12 | .79 |
| Flooring, oak .. 1,000 board feet.. | 90.00 | 214.30 | 130.06 |
| Glass, window .. 100 feet, 10 x 12.. | 5.20 | 12.44 | 5.11 |
| Lead, white ..... 100 pounds.. | 9.00 | 17.41 | 11.15 |
| Lime, lump ..... long ton.. | 7.84 | 16.50 | 13.53 |
| Nails, wire ..... keg, 100 pounds.. | 3.75 | 6.21 | 4.60 |
| Sand ..... long ton.. | 1.01 | 1.50 | 1.46 |
| Shingles, cedar ..... 1,000.. | 3.50 | 9.82 | 5.81 |
| Stone, broken ..... long ton.. | 1.46 | 2.40 | 2.34 |
| Tile, hollow .... 1,000 square feet.. | 87.50 | 140.63 | 102.19 |

An expenditure of $6,000,000 in the next three years is contemplated toward the erection of a new hotel, public-school buildings, and extension of the plant of Western University.

## *The Home of Francis J. Oaks, Jr., in Brookline, Massachusetts*

Bigelow & Wadsworth, Architects H. E. Whitten, Heating Engineer

MR. OAKS' home is heated by No. 44 Mills Boilers equipped with the Fess System for oil burning. It is seldom necessary to operate more than one boiler.

A picture of part of the boiler room is shown.

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## Department of Specifications

(*Continued from page 322*)

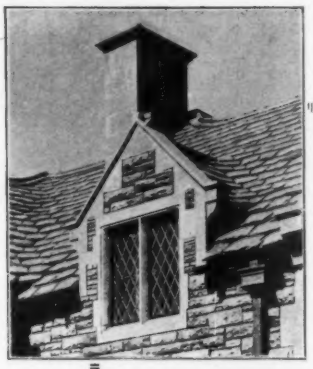
revolutions. It seems to be the general concensus that if the specification requires that concrete be mixed by machine with the materials revolving in the drum for one minute the resulting concrete will be of an acceptable quality.

The concrete ingredients must be mixed to the desired consistency which should be specified—that is, for reinforced work it must be sufficiently plastic so that it will flow around the reinforcing and fill the interstices. At times, such as for plain concrete floors that are to be placed on earth, and finished with a finished topping, the concrete should be of a fairly stiff and dry mix as the water in the topping that is to be applied later will permeate the dry concrete and make a much better floor than if it had been mixed quite wet. The consistency of the concrete must be varied to suit the various condition on the work and the specifications not only should give some power of control over consistency to the superintendent, but also should allow the contractor some latitude as to choice. In all cases, however, concrete that is "soupy" should not be used unless it is to be used as grout or for any one of a number of places where an extremely fine mix for surface finish or for penetration into small spaces is necessary.

If concrete is to be chuted in place the consistency of it must be such that it will travel along without the constituent ingredients becoming separated. If hydrated lime has been mixed into the concrete the chuting will be accomplished somewhat more easily than otherwise.

In caisson work or sub-aqueous work the consistency of the concrete must be given especial attention so that the conditions that will be present are fully explained by the specific requirements in the specifications. Specific instances will occur where a consistency of concrete that would be acceptable in most cases would be totally unacceptable in one or a few and the specification writer must exercise his judgment in these particular instances to make sure that the specifications recognize the possibility of these particular requirements coming up for attention. Otherwise, he might find himself involved in embarrassing moments with a contractor and may be accused of being quite specific on common matters but totally ignorant on more important matters that really deserve a more concise specification than usually is the case.

Re-tempering of concrete after initial set has taken place should never be permitted, regardless of any theories to the contrary that may be propagated by anyone advocating the use of compounds to be mixed integrally with the concrete. It may seem ridiculous to include a sentence covering rejection of partially set concrete or to require that concrete must be deposited in final position within five minutes or so after being mixed but there may come one time in a hundred when such a saving clause will be of great benefit in controversies.



Gate Lodge on Estate
of Mr. F. R. Ford

M. M. Stillman,
Architect

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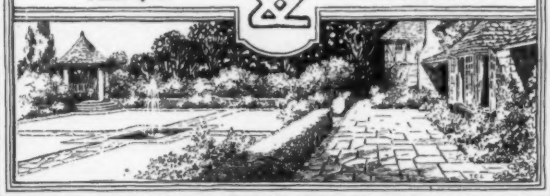

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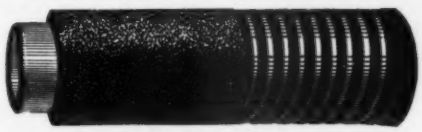

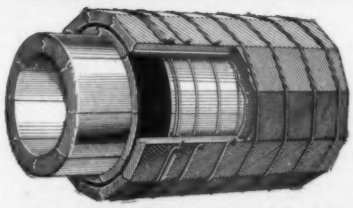

1855—BEST FOR 67 YEARS—1922

Wyckoff Wood Pipe is built of selected Canadian White Pine in diameters of from 1 to 48 inches. It is durable, economical and quickly laid, and is unaffected by frost or electrolysis. Carries 14 to 20 per cent. more water than metal pipe and will last as long.

Wyckoff's Underground Improved Steam Pipe Covering is built up of Cypress, the Wood Eternal, or White Pine. The Inner Shell is made of Two-inch staves drawn together by heavy tension in tubular shape and firmly bound with extra heavy steel wire, bound spirally with extra wrapping at each end, insuring strength and compactness.

There is a dead air space of ¼ inch between the Inner Shell and the Outer Shell, which is One Inch thick.

A. WYCKOFF & SON CO., Elmira, N. Y.

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### Iron Brackets, Palazzo del Magnifico, Siena, Italy

(*See Pages 301-308 for Illustrations*)

ON a great many of the Italian Renaissance palaces were placed iron or bronze brackets to hold flag standards or torches. These are a great source of delight to the lover of iron craftsmanship. In Siena as well as Florence a great many of these brackets are to be found. The ones referred to, which are only two of many of these, are excellent examples of this exquisite work and were designed and wrought by Giacomo Cozzarelli in about the year 1508.

### A Correction

DUE to erroneous information secured at the time of the receipt of the photographs illustrating an Apartment House on Park Avenue, which appeared reproduced in our issue of March 1, an unfortunate error was made in attributing this work to Mr. Wm. Lawrence Bottomley. This apartment building was designed and erected by Mr. J. Layng Mills, architect, and Mr. Bottomley was associated with Mr. Mills on this work.

### Tennessee War Memorial

### A Correction

The Editors, THE AMERICAN ARCHITECT:

WE regret to note that in the publication of the designs submitted in competition for the Tennessee War Memorial in your issue of March 29, the name of our associate, Edward E. Dougherty, has been omitted, and the authorship of the winning design ascribed to McKim, Mead & White. The design was submitted by Edward E. Dougherty and McKim, Mead & White in association.

May we ask you to publish this correction prominently in your next issue?

McKim, Mead & White.

### Le Brun Traveling Scholarship Competition

THE Le Brun Traveling Scholarship for 1922 has been awarded to Lionel H. Pries of Philadelphia, one of thirty-three competitors from all parts of the United States. The winner receives $1,400 to enable him to travel abroad for the purpose of study. In addition to the prize, the Jury gave mention placed first to George K. Trautwein of Philadelphia; mention placed second to John O. Vegezzi of New York City and mention placed third to Paul Hyde Harbach of Buffalo. Mentions not placed were awarded as follows: George N. Pauly, Roy F. Larson, Gerald K. Geerlings, Louis Fentor, Roy Walling Cheesman and Frederick Ross Lorenz.

This prize was founded by Michel Le Brun in 1910 and was originally awarded every other year, but recently Pierre Le Brun has increased the endowment so as to enable the New York Chapter, American Institute of Architects, trustees of the fund, to award it annually. The Jury of Award was composed of Pierre N. Le Brun, ex-officio, Milton B. Medary, Henry Bacon, Louis Ayres, Laurence F. Peck, Francis Nelson and Julian Clarence Levi, Chairman.

### Walls and Roofs for French Towns

AN elaborate architectural work in 4 volumes by Charles Letrosne has recently been published under the title of "Walls and Roofs for Our Home Towns." According to the editor's note, this is not an archæological study but aims to furnish to technicians and to the public a series of suggestive designs showing by means of colored plates how proper advantage may be taken of the various topographical characteristics of different parts of France.

The third volume of this series deals with inns, hotels, farm houses, rural dwellings and workingmen's houses. The book is essentially a *de luxe* volume and should have interest primarily for architects and for those especially interested in the architecture of France. The price of each volume is 150 francs, postage extra. It is published by Dan. Niestle, 5, Rue de Vienne, Paris.

### Plymouth Rock's New Canopy

THE recent dedication of the new canopy for Plymouth Rock affords for the first time in its history a shrine which befits its sentimental and historical importance. It is probable, too, that the canopy will mark the end of the pilgrimages of this rock, as the nation has learned to realize the importance of its preservation intact and guarded from damage, for the benefit of future generations, as in the case of the Liberty Bell. This memorial was erected by the Colonial Dames and presented to the State of Massachusetts.

### To Build Model City

THE Carnegie Foundation has donated $150,000 toward the reconstruction, as a model city, of Fargniers, Department of the Ainse, eighty miles from Paris, destroyed in the war. The first stone will be laid by the American Ambassador early in July.

### Historic Mansion Burned

THE interior of the historic President's house at the College of William and Mary, Williamsburg, Va., was partly burned recently.

The house was built in 1732 and was the headquarters of Gen. Cornwallis before the siege of Yorktown. Fire in 1781 destroyed the interior and left only the walls standing. It was at that time occupied by French officers serving with Washington.

# Barrett Specification Roofs

*Bonded for 20 and 10 Years*

## This wearing surface is "Fire Insurance" and "Life Insurance" for the Roof—

THE illustration shows the final operation in the laying of a Barrett Specification Roof—the pouring of the top coat of hot Specification Pitch and the spreading of the thick wearing surface of gravel or slag, after the entire roof has received the required number of plies of felt and pitch.

This wearing surface is *fire insurance* for the roof, because it provides a high degree of fire resistance. When burning brands fall on the slag or gravel surface, they do no serious damage. This is one of the reasons why the National Board of Fire Underwriters gives Barrett Specification Roofs the base rating.

This wearing surface is *life insurance* for the roof, because it holds in place and permits applying twice as much waterproofing material as would otherwise be possible. The top coat of roofing pitch is extra heavy. It is always *poured* on—not mopped.

Pitch is used, because of its elasticity and proved superiority as a waterproofing material.

Barrett Specification Roofs are bonded against roof repair expense—Type "AA" for 20 years, Type "A" for 10 years.

*Copies of the Barrett Specification sent free on request.*

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# PERSONALS

F. H. Marani, architect, announces that he has moved to 35 Colborne Street, Toronto, Canada.

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Felix Rasulo, architect, has moved from 139 Beach Street to 520 Proctor Building, Yonkers, N. Y.

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Harry Lucht has established an office for the practice of architecture at 242 Fulton Terrace, Cliffside Park, N. J.

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Day & Klauder, architects, have moved their office to the Franklin Bank Building, 1416 Chestnut Street, Philadelphia, Pa.

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S. R. Fetner, architect, has moved his office to 206½ Broad Street, Albany, Georgia, and desires manufacturers' catalogs and samples.

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Harold F. Young, architect, has moved his office from 253 West Forty-second Street to 131 West Thirty-ninth Street, New York City.

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Fred J. James, architect, Citizens Bank Building, Tampa, Fla., has re-opened and enlarged his office and will be pleased to have manufacturers' catalogs and samples.

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H. Percy Sharpe, architect, has moved his office from 501 Arctic Building, Seattle, Wash., to 621 H. W. Hellman Building, Los Angeles, Cal. Manufacturers' catalogs and samples are requested.

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Rodger C. McCarl, architect, wishes to announce that he has moved his offices from Wilmington, N. C., to 203-204 Latonia Building, Charlotte, N. C. Manufacturers' samples and catalogs are requested.

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It is announced that W. M. Wilson, architect, has opened an office for the practice of architecture at 15 Queen Street, St. Catherines, Ontario. Manufacturers are requested to send catalogs and samples.

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Charles S. Sedgwick, prominent architect of Minneapolis, Minn., died recently after a several years' illness. Mr. Sedgwick, who was 66 years old, specialized in fine churches and fine residences. He is survived by his wife and three children.

Geo. E. Trent, architect, wishes to announce that he has opened an office for the practice of architecture at 613½ Ninth Street, Huntington, W. Va., where he would be pleased to receive manufacturers' catalogs and samples.

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John K. Shirley has removed from Philadelphia and will resume architectural practice at 17 Shirley Road, N. Sydney, N. S. W., Australia, at which address he would be pleased to receive business literature and catalogs from American manufacturers.

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Louis P. Smithey and Matthews H. Tardy announce the opening of offices at 202 Anchor Building, Roanoke, Va., for the practice of architecture and engineering under the firm name of Smithey & Tardy. Manufacturers are requested to send their catalogs and samples.

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J. M. Gile, architect, 222½ N. Main Street, Pueblo, Colorado, lost his entire office equipment in a fire which recently destroyed the Opera House block. He will appreciate receiving any catalogs and data valuable to an architect's library.

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John M. Marriott, formerly of the firm of Marriott, Allen & Hall, of Columbus, Ohio, announces the opening of his office for the practice of architecture at 301 Oppenheimer Bank Building, San Antonio, Tex. Manufacturers are requested to send samples and catalogs.

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Announcement is made that Leon M. Gurda and Francis S. Gurda have formed a partnership for the practice of architecture under the firm name of Gurda & Gurda, architects, with offices at 470 Mitchell Street, Milwaukee, Wis. The firm name formerly was Leon M. Gurda, architect. Additional catalogs and samples are desired.

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Henry M. Congdon, F. A. I. A., of the architectural firm of Henry M. Congdon & Son, and also one-time secretary of the American Institute of Architects, died suddenly at his residence in New York. Mr. Congdon, a graduate of Columbia University, class of '54, studied architecture under John Priest, M. A., of Newburgh, N. Y., and began the practice of architecture in 1859, at the time of Mr. Priest's death. From the outset he specialized in church architecture. He was active up to the time of his death. He was in practice sixty-three years. One son survives him, Herbert Wheaton Congdon, his partner for over twenty years.

XUM

OLD ROUND TOWER, ENKHUISEN, HOLLAND

(FROM THE ORIGINAL WATER COLOR BY CASS GILBERT)